

Product data sheet

Characteristics

LMC058LF424

compact base - 42 + 4 I/O - 24 V DC supply - 2 slots for PCI



Main

Range of product	Modicon LMC058
Product or component type	Motion controller
Product specific application	-
Discrete I/O number	42
Battery type	3 V CR2477M lithium battery

Complementary

Discrete input number	4 regular input 12 input 10 fast input
Discrete input logic	Source input Sink regular input Sink fast input
Discrete input voltage	24 V
Discrete input voltage type	DC
Analogue input number	4
Analogue input type	Voltage +/- 10 V Current 4...20 mA Current 0...20 mA
Analogue input resolution	12 bits
Voltage state1 guaranteed	≥ 15 V regular input ≥ 15 V fast output ≥ 15 V fast input
Current state 1 guaranteed	≥ 2 mA regular input ≥ 2 mA fast output ≥ 2 mA fast input
Voltage state 0 guaranteed	≤ 5 V regular input ≤ 5 V fast output ≤ 5 V fast input
Current state 0 guaranteed	≤ 1.5 mA regular input ≤ 1.5 mA fast output ≤ 1.5 mA fast input
Discrete input current	4 mA regular input 4 mA fast input
Input impedance	6 kOhm regular input 6 kOhm fast input
Configurable filtering time	4 ms fast input/regular input and fast output 12 ms fast input/regular input and fast output 1.5 ms fast input/regular input and fast output 0 ms fast input/regular input and fast output
Anti bounce filtering	2 μ s...4 ms configurable fast input/regular input and fast output
Cable length	≤ 30 m for fast input
Insulation	Non-insulated between channels Between channels and internal logic at 500 V AC
Discrete output number	4 fast output 12 output
Discrete output logic	Source
Discrete output voltage	24 V DC

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Output voltage limits	19.2...28.8 V
Discrete output current	4 mA fast output
[Us] rated supply voltage	24 V DC for embedded expert modules power
Supply voltage limits	20.4...28.8 V
[In] rated current	0.3 A main supply 10 A I/O power segment 0.04 A embedded expert modules power
Peak current	1.2 A (duration= > 70 s) for main supply <= 50 kA (duration= <= 150 s) for embedded expert modules power <= 25 kA (duration= <= 500 s) for I/O power segment < 100 kA (duration= <= 70 s) for main supply
Power consumption	<= 14.14 W
Execution time per instruction	22 ns Boolean
Memory type	64 MB RAM memory 128 MB flash memory
Realtime clock	With user calibration <= 6 s/month Without any user calibration < 30 s/month at 25 °C
Data backed up	Variables of type retain and retain persistent with battery
Battery life	1.5 yr
Integrated connection type	2 free slots PCI 1 isolated serial link with USB type A connector; transmission rate: 480 Mbit/s 1 isolated serial link with mini B USB connector; transmission rate: 480 Mbit/s 1 isolated serial link with female RJ45 connector; protocol: Ethernet Modbus TCP/IP with slave method; physical interface: 10BASE-T/100BASE-TX 1 encoder with female SUB-D 15 connector 1 CAN port with male SUB-D 9 connector; protocol: CANopen with master method 1 CAN port with male SUB-D 9 connector; protocol: CANmotion bus or CANopen with master method 1 isolated serial link with female RJ45 connector; protocol: Modbus with master/slave method; transmission frame: RTU/ASCII or character mode ASCII; physical interface: RS232/RS485; transmission rate: 300...115200 bps
Transmission rate	800 kbit/s with 25 m bus; protocol: CANopen 500 kbit/s with 100 m bus; protocol: CANopen 50 kbit/s with 1000 m bus; protocol: CANopen 250 kbit/s with 250 m bus; protocol: CANopen 20 kbit/s with 2500 m bus; protocol: CANopen 125 kbit/s with 500 m bus; protocol: CANopen 1000 kbit/s with 4 m bus; protocol: CANopen 10 kbit/s with 5000 m bus; protocol: CANopen
Counting input number	8 at 200 kHz
Local signalling	1 LED red for APP1 1 LED per channel for APP0 1 LED green/yellow for MBS COM 1 LED green/red for CAN1 STS 1 LED for CAN0 STS
Marking	CE
Mounting support	Symmetrical DIN rail
Width	237.5 mm
Height	99 mm
Depth	85 mm
Product weight	0.77 kg

Environment

Standards	CSA C22.2 No 142 IEC 61131-2 UL 508 CSA C22.2 No 213
Product certifications	CSA C-Tick CULus GOST-R
Ambient air temperature for operation	0...50 °C vertical installation 0...60 °C with horizontal installation 0...55 °C without horizontal installation
Ambient air temperature for storage	-25...70 °C
Relative humidity	5...95 % without condensation

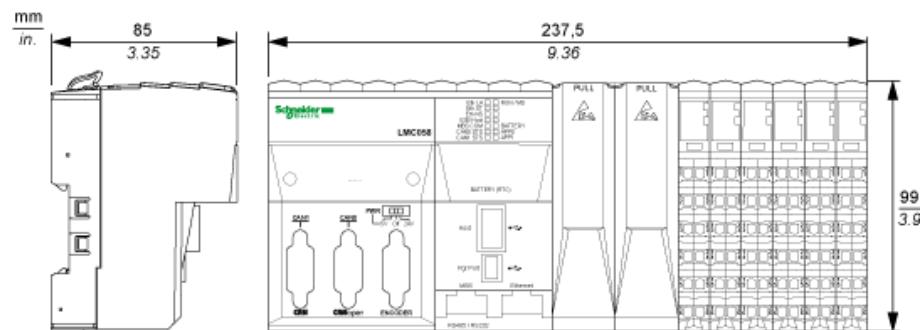
IP degree of protection	IP20 conforming to IEC 61131-2
Pollution degree	2 conforming to IEC 60664
Operating altitude	0...2000 m
Storage altitude	0...3000 m
Vibration resistance	3.5 mm at 5...8.4 Hz with DIN rail mounting 1 gn at 8.4...150 Hz with DIN rail mounting
Shock resistance	15 gn for 11 ms
Electromagnetic compatibility	Conducted and radiated emissions conforming to CISPR 11 Conducted RF disturbances conforming to EN/IEC 61000-4-6 Surge immunity test (test level: 1 kV) - common mode conforming to EN/IEC 61000-4-5 Surge immunity test (test level: 0.5 kV) - differential mode conforming to EN/IEC 61000-4-5 Electrical fast transient/burst immunity test (test level: 2 kV) - power lines conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test (test level: 1 kV) - shielded cable conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test (test level: 1 kV) - I/O conforming to EN/IEC 61000-4-4 Susceptibility to electromagnetic fields (test level: 10 V/m) - 80...2000 MHz conforming to EN/IEC 61000-4-3 Susceptibility to electromagnetic fields (test level: 1 V/m) - 2...2.7 GHz conforming to EN/IEC 61000-4-3 Electrostatic discharge immunity test (test level: 4 kV) - on air conforming to EN/IEC 61000-4-2 Electrostatic discharge immunity test (test level: 8 kV) - on contact conforming to EN/IEC 61000-4-2
Disturbance radiated/conducted	CISPR 11

Offer Sustainability

Sustainable offer status	Not Green Premium product
RoHS (date code: YYWW)	Compliant - since 1039 -  Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available

Controller

Dimensions



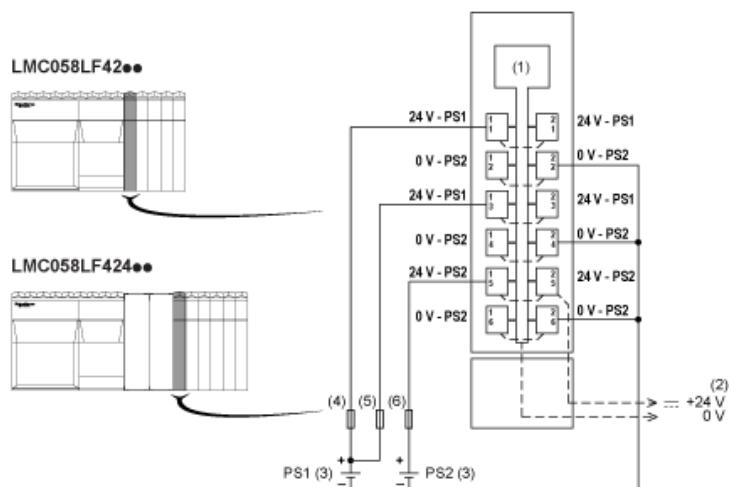
TM5 System Wiring Recommendations

Wire Sizes to Use with Removable Spring Terminal Blocks

mm in.	0,35	0,5	0,75	1,5
mm ²	0,08...2,5	0,25...2,5	0,25...1,5	2 x 0,25...2 x 0,75
AWG	28...14	24...14	24...16	2 x 24...2 x 18

External Power Supplies

Wiring Diagram of the Controller Power Distribution Module



- (1) Internal electronics
- (2) 24 Vdc I/O power segment integrated into the bus bases
- (3) PS1/PS2: External isolated SELV power supply 24 Vdc
- (4) External fuse, Type T slow-blow, 3 A 250 V
- (5) External fuse, Type T slow-blow, 2 A 250 V
- (6) External fuse, Type T slow-blow, 10 A max., 250 V