

# Product datasheet

Specifications



## compact base - 42 I/O - 24 V DC supply

LMC058LF42

### 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	10 for fast input 12 for input 4 for regular input
Discrete input logic	Sink for fast input Sink for regular input Source for input
Discrete input voltage	24 V
Discrete input voltage type	DC
Voltage state 1 guaranteed	>= 15 V for fast input >= 15 V for fast output >= 15 V for regular input
Voltage state 0 guaranteed	<= 5 V for fast input <= 5 V for fast output <= 5 V for regular input
Discrete input current	4 mA for fast input 4 mA for regular input
Input impedance	6 kOhm for fast input 6 kOhm for regular input
Configurable filtering time	0 ms for fast input/regular input and fast output 1.5 ms for fast input/regular input and fast output 12 ms for fast input/regular input and fast output 4 ms for fast input/regular input and fast output
Anti bounce filtering	2 µs...4 ms configurable fast input/regular input and fast output
Maximum cable distance between devices	<30 m for fast input
Insulation	Between channels and internal logic at 500 V AC Non-insulated between channels
Discrete output number	12 output 4 fast output
Discrete output logic	Source
Discrete output voltage	24 V DC

Output voltage limits	19.2...28.8 V
Discrete output current	4 mA for 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	0.04 A for embedded expert modules power 0.28 A for main supply 10 A for I/O power segment
Peak current	25 kA (duration = <= 500 s) for I/O power segment 50 kA (duration = <= 150 s) for embedded expert modules power 1.2 A (duration = > 70 s) for main supply 100 kA (duration = <= 70 s) for main supply
Power consumption in W	13.03 W
Memory type	128 MB flash 64 MB RAM
Realtime clock	Without any user calibration clock, clock drift < 30 s/month at 25 °C With user calibration clock, clock drift <= 6 s/month
Data backed up	Battery variables of type retain and retain persistent
Battery life	1.5 year(s)
Integrated connection type	1 isolated serial link with female RJ45 connectorModbus with master/slave RTU/ASCII or character mode ASCII, physical interface: RS232/RS485, transmission rate: 300...115200 bps 1 CAN port with male SUB-D 9 connectorCANmotion bus or CANopen with master 1 CAN port with male SUB-D 9 connectorCANopen with master 1 encoder with female SUB-D 15 connector 1 isolated serial link with female RJ45 connectorEthernet Modbus TCP/IP with slave, physical interface: 10BASE-T/100BASE-TX 1 isolated serial link with mini B USB connector, transmission rate: 480 Mbit/s 1 isolated serial link with USB type A connector, transmission rate: 480 Mbit/s
Transmission rate	10 kbit/s for bus length of 5000 m for CANopen 1000 kbit/s for bus length of 4 m for CANopen 125 kbit/s for bus length of 500 m for CANopen 20 kbit/s for bus length of 2500 m for CANopen 250 kbit/s for bus length of 250 m for CANopen 50 kbit/s for bus length of 1000 m for CANopen 500 kbit/s for bus length of 100 m for CANopen 800 kbit/s for bus length of 25 m for CANopen
Counting input number	8 counting input(s) at 200 kHz
Local signalling	1 LED for CAN0 STS 1 LED green/red for CAN1 STS 1 LED green/yellow for MBS COM 1 LED per channel for APP0 1 LED red for APP1
Marking	CE
Mounting support	Symmetrical DIN rail
Width	175 mm
Height	99 mm
Depth	85 mm
Net weight	0.55 kg

## Environment

Standards	CSA C22.2 No 142 CSA C22.2 No 213 UL 508 IEC 61131-2
Product certifications	C-Tick cULus CSA GOST-R
Ambient air temperature for operation	0...55 °C without derating (horizontal installation) 0...60 °C with derating factor (horizontal installation) 0...50 °C (vertical 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	1 gn at 8.4...150 Hz on DIN rail 3.5 mm at 5...8.4 Hz on DIN rail
Shock resistance	15 gn for 11 ms
Electromagnetic compatibility	Electrostatic discharge immunity test - test level: 8 kV (on contact) conforming to EN/IEC 61000-4-2 Electrostatic discharge immunity test - test level: 4 kV (on air) conforming to EN/IEC 61000-4-2 Susceptibility to electromagnetic fields - test level: 1 V/m (2...2.7 GHz) conforming to EN/IEC 61000-4-3 Susceptibility to electromagnetic fields - test level: 10 V/m (80...2000 MHz) conforming to EN/IEC 61000-4-3 Electrical fast transient/burst immunity test - test level: 1 kV (I/O) 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: 2 kV (power lines) conforming to EN/IEC 61000-4-4 Surge immunity test - test level: 0.5 kV (differential mode) conforming to EN/IEC 61000-4-5 Surge immunity test - test level: 1 kV (common mode) conforming to EN/IEC 61000-4-5 Conducted RF disturbances conforming to EN/IEC 61000-4-6 Conducted and radiated emissions conforming to CISPR 11
Disturbance radiated/ conducted	CISPR 11

### Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	13.200 cm
Package 1 Width	15.500 cm
Package 1 Length	31.500 cm
Package 1 Weight	787.000 g
Unit Type of Package 2	S04
Number of Units in Package 2	6
Package 2 Height	30.000 cm
Package 2 Width	40.000 cm
Package 2 Length	60.000 cm
Package 2 Weight	5.736 kg

### Offer Sustainability






Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>

WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes
<b>Contractual warranty</b>	
Warranty	18 months



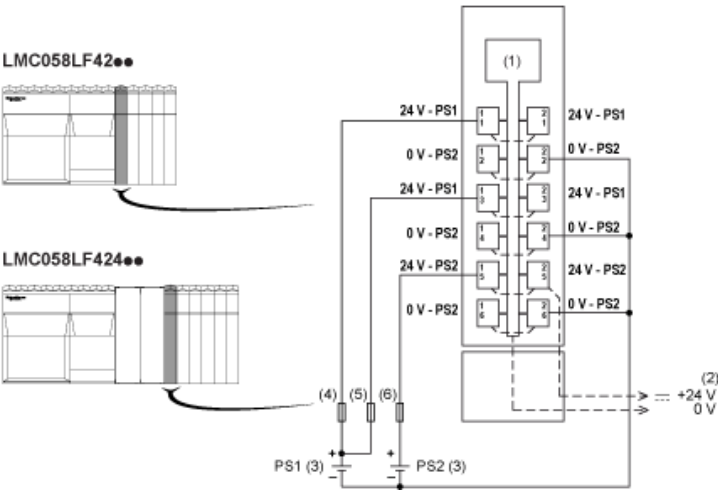
TM5 System Wiring Recommendations

Wire Sizes to Use with Removable Spring Terminal Blocks

<div><div>mm</div><div>in.</div></div> <div></div>				
mm <sup>2</sup>	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

Recommended replacement(s)