



## Main

|                           |                  |
|---------------------------|------------------|
| Range of Product          | Modicon M580     |
| Product or Component Type | Processor module |
| Impregnation material     | Conformal coated |

## Complementary

|                                         |                                                                                                                                                                                                                                        |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of racks                         | 4                                                                                                                                                                                                                                      |
| Discrete I/O processor capacity         | 2048 I/O                                                                                                                                                                                                                               |
| Analogue I/O processor capacity         | 512 I/O                                                                                                                                                                                                                                |
| Number of application specific channel  | 72                                                                                                                                                                                                                                     |
| Application specific I/O                | Counter<br>Motion control<br>SSI encoder<br>Accurate time stamping<br>Serial link<br>HART                                                                                                                                              |
| Checks                                  | Process control<br>Safety control                                                                                                                                                                                                      |
| Control channels                        | Programmable loops                                                                                                                                                                                                                     |
| Integrated connection type              | 1 Ethernet TCP/IP service port<br>2 Ethernet TCP/IP device network<br>USB type mini B                                                                                                                                                  |
| Number of remote I/O station            | 8 - 2 remote drop                                                                                                                                                                                                                      |
| Number of distributed equipment         | 64                                                                                                                                                                                                                                     |
| Discrete I/O number                     | 16                                                                                                                                                                                                                                     |
| Communication module processor capacity | 2 Ethernet communication module<br>8 AS-Interface module                                                                                                                                                                               |
| Communication Service                   | DIO scanner<br>RIO scanner                                                                                                                                                                                                             |
| Memory description                      | Expandable flash, 4 GB data storage<br>Integrated RAM, 10 kB system memory<br>Integrated RAM, 8 MB program process<br>Integrated RAM, 768 kB data process<br>Integrated RAM, 2 MB program safety<br>Integrated RAM, 512 kB data safety |

|                               |                                                                                                                       |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Application structure         | 128 event tasks<br>2 auxiliary tasks<br>1 cyclic/periodic master task<br>1 periodic fast task<br>1 periodic safe task |
| Number of instructions per ms | 7.5 Kinst/ms 65 % Boolean + 35 % fixed arithmetic<br>10 Kinst/ms 100 % Boolean                                        |
| Current consumption           | 295 mA 24 V DC                                                                                                        |
| MTBF reliability              | 767500 H                                                                                                              |
| Marking                       | CE                                                                                                                    |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vibration resistance                  | 3 gn                                                                                                                                                                                                                                                                                                                                           |
| Shock resistance                      | 15 gn                                                                                                                                                                                                                                                                                                                                          |
| Ambient air temperature for operation | -13...140 °F (-25...60 °C)                                                                                                                                                                                                                                                                                                                     |
| Ambient Air Temperature for Storage   | -40...185 °F (-40...85 °C)                                                                                                                                                                                                                                                                                                                     |
| Operating altitude                    | 0...6561.68 ft (0...2000 m)<br>2000...5000 m with derating factor                                                                                                                                                                                                                                                                              |
| Relative humidity                     | 5...95 % 131 °F (55 °C) without condensation                                                                                                                                                                                                                                                                                                   |
| IP Degree of Protection               | IP20                                                                                                                                                                                                                                                                                                                                           |
| Directives                            | 2014/30/EU - electromagnetic compatibility<br>2006/42/EC - machinery<br>2014/34/EU - ATEX directive                                                                                                                                                                                                                                            |
| Product certifications                | CE<br>UL<br>CSA<br>RCM<br>EAC<br>Merchant Navy<br>ATEX zone 2/22<br>IECEx zone 2/22<br>TÜV                                                                                                                                                                                                                                                     |
| Standards                             | EN/IEC 61131-2<br>EN/IEC 61010-2-201<br>UL 61010-2-201<br>CSA C22.2 No 61010-2-201<br>IACS E10<br>EN/IEC 61000-6-5<br>EN/IEC 61850-3<br>EN/IEC 60079-0                                                                                                                                                                                         |
| Environmental characteristic          | Hazardous location class I division 2<br>Gas resistant class Gx ISA S71.04<br>Gas resistant class 3C4 IEC 60721-3-3<br>Dust resistant class 3S4 IEC 60721-3-3<br>Sand resistant class 3S4 IEC 60721-3-3<br>Salt resistant level 2 IEC 68252<br>Mold growth resistant class 3B2 IEC 60721-3-3<br>Fungal spore resistant class 3B2 IEC 60721-3-3 |
| Protective treatment                  | Conformal coating                                                                                                                                                                                                                                                                                                                              |
| Safety level                          | SIL 3 IEC 61508<br>SIL 3 IEC 61511<br>SILCL 3 IEC 62061<br>SILCL 3 ISO 13849-1 category 4<br>SIL 4 EN 50126<br>SIL 4 EN 50128<br>SIL 4 EN 50129                                                                                                                                                                                                |
| Supply                                | Internal power supply via rack                                                                                                                                                                                                                                                                                                                 |

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status LED | Processor running (RUN) 1 LED Green)<br>Processor or system fault (ERR) 1 LED Red)<br>I/O module fault (I/O) 1 LED Red)<br>Download in progress (DL) 1 LED Green)<br>Memory card or CPU flash fault (BACKUP) 1 LED Red)<br>ETH MS (Ethernet port configuration status) 1 LED green/red)<br>Eth NS (Ethernet network status) 1 LED green/red)<br>Processor in safety mode (SRUN) 1 LED Green)<br>Processor in maintenance mode (SMOD) 1 LED Green)<br>I/O values overridden by user (FORCED IO) 1 LED Red) |
| Net Weight | 1.87 Lb(US) (0.849 kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Ordering and shipping details

|                       |                  |
|-----------------------|------------------|
| GTIN                  | 3606489705480    |
| Nbr. of units in pkg. | 1                |
| Package weight(Lbs)   | 31.08 Oz (881 g) |

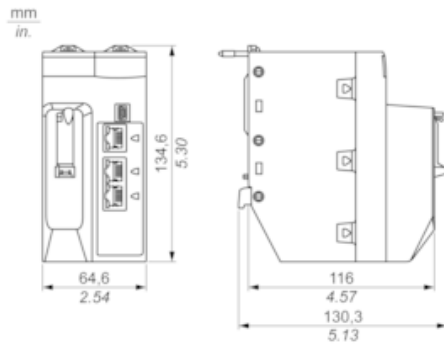
## Packing Units

|                              |                       |
|------------------------------|-----------------------|
| Unit Type of Package 1       | PCE                   |
| Package 1 Height             | 3.50 In (8.9 cm)      |
| Package 1 width              | 7.09 In (18 cm)       |
| Package 1 Length             | 9.84 In (25 cm)       |
| Unit Type of Package 2       | S03                   |
| Number of Units in Package 2 | 6                     |
| Package 2 Weight             | 12.79 Lb(US) (5.8 kg) |
| Package 2 Height             | 11.81 In (30 cm)      |
| Package 2 width              | 11.81 In (30 cm)      |
| Package 2 Length             | 15.75 In (40 cm)      |

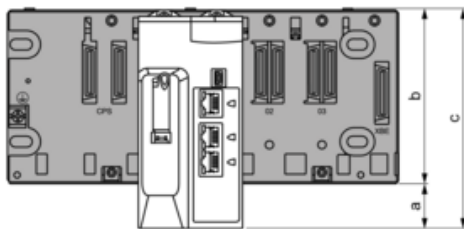
## Offer Sustainability

|                            |                                                                                                                                                                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                                                       |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                           |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>                                                                                                                                                                                              |
| Mercury free               | Yes                                                                                                                                                                                                                                                                                         |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</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.                                                                                                                                                                |

## CPU Module Only



## Modules Mounted on Racks

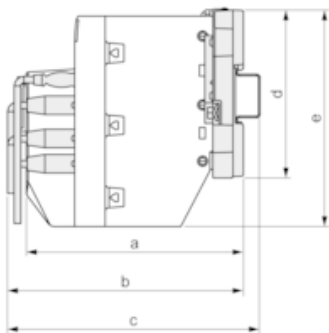


a: additional space below the rack to accommodate the height of the CPU. For an X Bus rack, the value is 30.9 mm (1.217 in.); for an Ethernet rack, the value is 29.49 mm (1.161 in.).

b: the height of the rack. For an X Bus rack, the height is 103.7 mm (4.083 in.); for an Ethernet rack, the height is 105.11 mm (4.138 in.).

c: the height of the main local rack, 134.6 mm (5.299 in.)

## Modules and Cables Mounted in an Enclosure



a: enclosure depth: 135 mm (5.315 in.)

b: wiring + module depth: > 146 mm (5.748 in.)

c: wiring + module + DIN rail depth: > 156 mm (6.142 in.)

d: rack height: for an X Bus rack 103.7 mm (4.083 in.); for an Ethernet rack, 105.11 mm (4.138 in.)

e: module height: 134.6 mm (5.299 in.)

|                       |                |
|-----------------------|----------------|
| Product Life Status : | Commercialised |
|-----------------------|----------------|