



### Main

|                           |                  |
|---------------------------|------------------|
| Range of product          | Modicon M580     |
| Product or component type | Processor module |

### Complementary

|                                                     |                                                                                                                                                                                                                                                                |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of racks                                     | 4                                                                                                                                                                                                                                                              |
| Local I/O processor capacity (discrete)             | 2048 I/O                                                                                                                                                                                                                                                       |
| Local I/O processor capacity (analog)               | 512 I/O                                                                                                                                                                                                                                                        |
| Number of application specific channel (local rack) | 72                                                                                                                                                                                                                                                             |
| Application specific I/O                            | Serial link<br>Counter<br>Accurate time stamping<br>HART<br>Motion control<br>SSI encoder                                                                                                                                                                      |
| Checks                                              | Process control                                                                                                                                                                                                                                                |
| Control channels                                    | Programmable loops                                                                                                                                                                                                                                             |
| Integrated connection type                          | 1 Ethernet TCP/IP for service port<br>2 Ethernet TCP/IP for device network<br>USB type mini B                                                                                                                                                                  |
| Number of remote I/O station                        | 8 - 2 rack(s) per remote drop                                                                                                                                                                                                                                  |
| Number of distributed equipment                     | 64                                                                                                                                                                                                                                                             |
| 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 for data storage<br>Integrated RAM, 10 kB for system memory<br>Integrated RAM, 8 MB for program process<br>Integrated RAM, 768 kB for data process<br>Integrated RAM, 2 MB for program safety<br>Integrated RAM, 512 kB for data safety |
| Application structure                               | 64 event tasks<br>2 auxiliary tasks<br>1 cyclic/periodic master task<br>1 periodic fast 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 at 24 V DC                                                                                                                                                                                                                                              |
| MTBF reliability                                    | 600000 H                                                                                                                                                                                                                                                       |
| Marking                                             | CE                                                                                                                                                                                                                                                             |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vibration resistance                  | 3 gn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Shock resistance                      | 15 gn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Ambient air temperature for operation | 0...60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Ambient air temperature for storage   | -40...85 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operating altitude                    | 0...2000 m<br>2000...5000 m with derating factor                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Relative humidity                     | 5...95 % at 55 °C without condensation                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| IP degree of protection               | IP20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Directives                            | 2014/35/EU - low voltage directive<br>2014/30/EU - electromagnetic compatibility                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product certifications                | CE<br>UL<br>CSA<br>RCM<br>EAC<br>Merchant Navy                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Standards                             | EN 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, interface type 1 and type 2<br>EN/IEC 61850-3, location G                                                                                                                                                                                                                                                                                                                                 |
| Environmental characteristic          | Safety<br>Corrosion resistance<br>Salt mist<br>Dust resistant<br>Hazardous location class I division 2                                                                                                                                                                                                                                                                                                                                                                                                    |
| Supply                                | Internal power supply via rack                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Status LED                            | 1 LED (green)processor running (RUN)<br>1 LED (red)processor or system fault (ERR)<br>1 LED (red)I/O module fault (I/O)<br>1 LED (green)download in progress (DL)<br>1 LED (red)memory card or CPU flash fault (BACKUP)<br>1 LED (green/red)ETH MS (Ethernet port configuration status)<br>1 LED (green/red)Eth NS (Ethernet network status)<br>1 LED (green)processor in safety mode (SRUN)<br>1 LED (green)processor in maintenance mode (SMOD)<br>1 LED (red)I/O values overridden by user (FORCED IO) |
| Net weight                            | 0.849 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

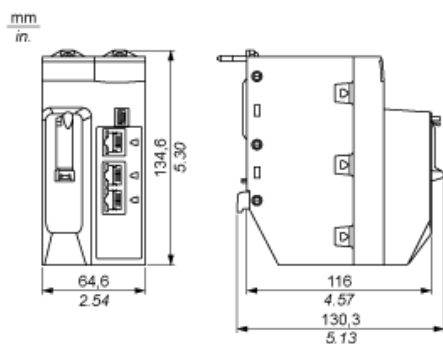
## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 884 g    |
| Package 1 Height             | 9 cm     |
| Package 1 width              | 18 cm    |
| Package 1 Length             | 25 cm    |
| Unit Type of Package 2       | S03      |
| Number of Units in Package 2 | 6        |
| Package 2 Weight             | 5.745 kg |
| Package 2 Height             | 30 cm    |
| Package 2 width              | 30 cm    |
| Package 2 Length             | 40 cm    |

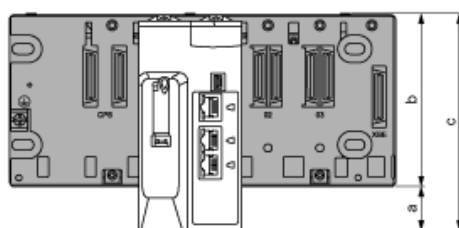
## Offer Sustainability

|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| 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

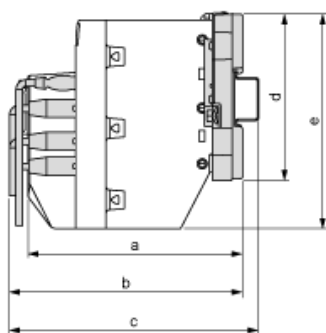


## Modules Mounted on Racks



- 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.)