

\*\*\* SPARE PART\*\*\* SIMATIC DP, EXPANSION MODULE EM 144  
 FOR ET 200X, IP66/67 2AI, +/- 10V, 12 BIT + SIGN, WITH  
 DIAGNOSIS BY CHANNEL



Figure similar

| Input current  |                 |
|--|-----------------|
| from supply voltage L+, max.   | 40 mA           |
| Encoder supply   |                 |
| Number of outputs  | 2               |
| Short-circuit protection   | Yes; Electronic |
| Output current   |                 |
| • up to 40 °C, max.  | 0.9 A           |
| • up to 55 °C, max.  | 0.7 A           |
| Power loss   |                 |
| Power loss, typ.   | 0.9 W           |
| Analog inputs  |                 |
| Number of analog inputs  | 2               |
| permissible input voltage for voltage input<br>(destruction limit), max. | 30 V            |
| Input ranges   |                 |
| • Voltage  | Yes             |

|  |  |
|--|--|
| <b>Input ranges (rated values), voltages</b>                           |  |
| • -10 V to +10 V   | Yes  |
| • Input resistance (-10 V to +10 V)                                    | 100 kΩ   |
| <b>Cable length</b>  |  |
| • shielded, max.   | 30 m   |
| <b>Analog value generation for the inputs</b>                          |  |
| Analog value display   | S7 Format / S5 Format  |
| Measurement principle  | integrating  |
| <b>Integration and conversion time/resolution per channel</b>          |  |
| • Resolution with overrange (bit including sign), max.                 | 12 bit; + sign; overrange 17.5%                                      |
| • Integration time, parameterizable                                    | Yes  |
| • Integration time (ms)  | 16,7 / 20 ms   |
| • Interference voltage suppression for interference frequency f1 in Hz | 50 / 60 Hz   |
| <b>Encoder</b>   |  |
| Connection of signal encoders  |  |
| • for voltage measurement  | Yes  |
| <b>Errors/accuracies</b>   |  |
| Operational error limit in overall temperature range                   |  |
| • Voltage, relative to input range, (+/-)                              | 1.2 %  |
| • Current, relative to input range, (+/-)                              | 1.2 %  |
| <b>Interrupts/diagnostics/status information</b>                       |  |
| Diagnostic functions   | Yes; Parameterizable   |
| <b>Alarms</b>  |  |
| • Diagnostic alarm   | Yes  |
| • Limit value alarm  | Yes; upper limit, channel by channel/ lower limit channel by channel |
| • Hardware interrupt   | Yes  |
| <b>Diagnostic messages</b>   |  |
| • Overflow/underflow   | Yes; channel by channel  |
| <b>Diagnostics indication LED</b>                                      |  |
| • Group error SF (red)   | Yes  |
| <b>Potential separation</b>  |  |
| Potential separation analog inputs                                     |  |
| • Potential separation analog inputs                                   | No   |
| <b>Connection method</b>   |  |
| Design of electrical connection for the inputs and outputs             | 4/5-pin M12 circular connectors                                      |
| <b>Dimensions</b>  |  |

|                       |                           |
|-----------------------|---------------------------|
| Width                 | 87 mm; Width module 60 mm |
| Height                | 110 mm                    |
| Depth                 | 55 mm                     |
| <b>Weights</b>        |                           |
| Weight, approx.       | 250 g                     |
| <b>last modified:</b> | 03/11/2017                |