# *XT* IEC Control for Wind Power Applications — 580 – 2000 Ampere Vacuum Contactors

Product Focus

## *XT* IEC Control — Eaton's Wind Power Solution

Eaton's electrical business is pleased to meet the needs of wind turbine and wind farm applications by offering *XT* IEC contactors up to 2000 amperes. These high amperage contactors can be used to control the power circuit in all standard wind power configurations such as fixed speed, doubly fed and permanent magnet types. The XTCE580N – XTCEC20R (580 – 2000 amperes) contactors offer solutions up to 1000 volts that include:

- **Vacuum Technology**
  Efficient, safe and reliable switching at high amperage.
- **Extended Life**
  Up to 1.3 million electrical operations (AC-1 at rated current).
- **Flexible & Reliable Control**
  Low-power switching from a variety of sources.
- **Compact Design**
  Small footprint allows for flexible packaging.

### Highly Efficient Switching

The benefits of vacuum technology arise from the contacts being sealed within a system of vacuum tubes. In this air-free chamber, arc extinction and current interruption are completed within a fraction of a cycle, minimizing contact burn and avoiding exhaust gases.

### Extended Life

No arcing in the vacuum tube minimizes contact burn, resulting in a significantly longer lifespan and lower maintenance costs than typical "air-break" contactors. The *XT* vacuum contactors also have an integrated suppressor between the main contacts to protect the motor winding and keep your application running smoothly.

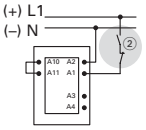
### Flexible Control Scheme

The *XT* contactors use an electronic coil interface design that allows for flexibility in switching and greater reliability. These high amperage contactors can be switched conventionally with full power to the coil, directly from a PLC output, or from a low-power command device. Low pick-up and sealing power generates less heat and reduces the investment in control power transformers.

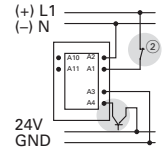
### Compact Design

The three switching tubes and electromechanical drive system of the *XT* 580 – 2000 ampere contactors are arranged in an extremely compact design. This allows for smaller switchgear dimensions, while switching higher currents — up to 2000 amperes!

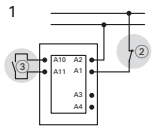
**Conventional**
A1/A2 are applied to voltage in the usual manner.



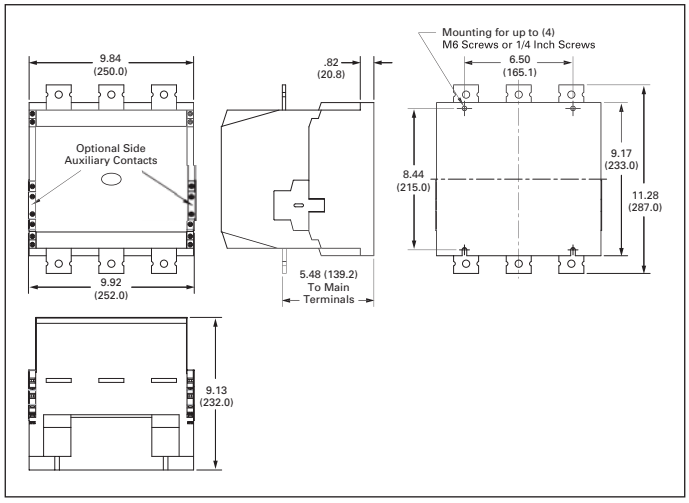

**Direct from the PLC**
A 24 V output from the PLC can be connected directly to connections A3/A4.



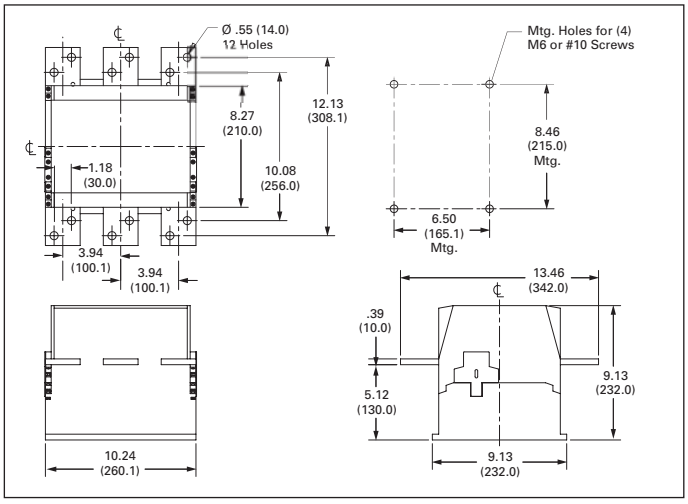

**From Low-Consumption Command Devices**
Command devices which can only be subject to minimal loads such as circuit board relays, control circuit devices or position switches can be connected directly to A10/A11.




| Type | XTCE580N | XTCE650N | XTCE750N | XTCE820N | XTCEC10N | XTCEC14P | XTCEC16R | XTCEC20R |
|---|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |  |
| **Electrical Data** | | | | | | | | |
| $I_e$ AC-1 at 40°C (A) | 980 | 1041 | 1102 | 1225 | 1225 | 1714 | 2200 | 2450 |
| $I_e$ AC-1 at 60°C (A) | 800 | 850 | 900 | 1000 | 1000 | 1400 | 1800 | 2000 |
| $I_e$ AC-3 / 690 V (A) | 580 | 650 | 750 | 820 | 1000 | — | 1600 | — |
| Rated Voltage $U_e$ (V) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Electrical Life $I_e$ AC-1 (Operations) | 1,300,000 | 1,100,000 | 1,000,000 | 800,000 | 800,000 | 500,000 | 250,000 | 250,000 |
| Mechanical Life $I_e$ (Operations) | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 | 5,000,000 |
| **Magnet Systems** | | | | | | | | |
| Rated Control Voltage (Vac/dc) | 48 – 500 -30%/+15% | 48 – 500 -30%/+15% | 48 – 500 -30%/+15% | 48 – 500 -30%/+15% | 110 – 250 -30%/+15% | 220 – 250 -30%/+15% | 220 – 250 -30%/+15% | 220 – 250 -30%/+15% |
| Power Consumption, Pull-In (VA) | 800 | 800 | 800 | 800 | 800 | 800 | 1600 | 1600 |
| Power Consumption, Sealing (VA) | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 15 | 15 |



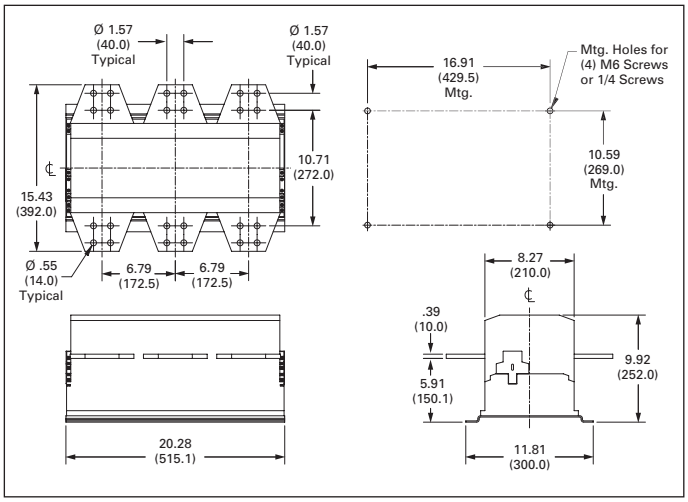

XTCE N-Frame Contactor




XTCE P-Frame Contactor

## Globally Focused, Locally Available

***XT*** contactors are built for applications and installations around the world, but local availability is key. Eaton works closely with its distribution partners to ensure an on-demand inventory is always available for your job assembly and maintenance requirements.

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