

## XTSE Contactor



## XTSE Contactors

### Product Description

Eaton XTSE safety contactors are designed with the OEM and end customer in mind.

Providing enhanced levels of safety, XTSE contactors integrate to applications to not only achieve the highest safety circuits, but provide additional levels of protection that reinforce end-user safety.

### Application Description

With offerings up to 150 A and 125 hp, XTSE contactors were engineered to provide highly effective control and protection for motors, compressors and pumps, etc. XTSE contactors can be used in safety applications according to EN 954-1, EN ISO 13849-1 and IEC 62061 up to Category 4, PI e and SIL 3. Information concerning safety-related characteristics (B10 and B10d values) is available online. The auxiliary contact modules and built-in auxiliary contacts meet IEC EN 60947-5-1 Annex L (positively driven) and IEC EN 60947-4-1 Annex F (mirror contacts).

## Contents

### Description

	<i>Page</i>
Relays and Timers .....	<b>V5-T1-3</b>
Miniature Controls .....	<b>V5-T1-18</b>
Contactors and Starters .....	<b>V5-T1-35</b>
XTSE Contactors	
Catalog Number Selection .....	<b>V5-T1-129</b>
Product Selection .....	<b>V5-T1-129</b>
Thermal Overload Relays .....	<b>V5-T1-130</b>
C440/XT Electronic Overload Relay .....	<b>V5-T1-143</b>
Manual Motor Protectors .....	<b>V5-T1-159</b>
Combination Motor Controllers .....	<b>V5-T1-193</b>
XT Electronic Manual Motor Protector .....	<b>V5-T1-219</b>
EMS—Electronic Motor Starter .....	<b>V5-T1-232</b>
XT DC Contactors .....	<b>V5-T1-234</b>
Reference Data .....	<b>V5-T1-236</b>

### Features and Benefits

#### Clear Inspection Window

- The clear inspection window located on top of the auxiliary contact prevents the contactor from being manually activated and also allows for safe status monitoring for the user

#### Rated for Highest Safety Characteristics

- XTSE contactors are able to integrate to safety circuits for up to category 4, PI e and SIL 3 applications
- SUVA Certified

#### Safety Agency Approval

- Integrated front-mounted auxiliary contacts
- XTSE contactors utilize a new enhanced latching mechanism to prevent removal of the auxiliary contact

### Standards and Certifications

- CE Approved
- UL Listed
- IEC/EN 60947-4-1, 60947-5-1
- CSA Listed



Catalog Number Selection

XTSE Contactors



Product Selection

XTSRE10B



XTSE Safety Relay

Conventional Thermal Current $I_{th}$ (A)	Rated Operational Current AC-15 $I_e$ (A)			Auxiliary Contacts	Coil Voltage	
	220–240 V	380–415 V	500 V		110 V, 50 Hz; 120 V, 60 Hz	24 Vdc
16	6	4	1.5	4NO, 4NC	XTSRE10B44A	XTSRE10B44TD
16	6	4	1.5	3NO, 3NC+1NO, 1NC ①	XTSRE10BE44A	XTSRE10BE44TD

XTSE Safety Contactor

XTSE\_B\_



Horsepower Rating (hp), Three-Phase 200/208 V	230/240 V	460/480 V	575/600 V	Auxiliary Contacts	Coil Voltage	
					110 V, 50 Hz; 120 V, 60 Hz	24 Vdc
1-1/2	2	3	5	2NO, 3NC	XTSE007B23A	XTSE007B23TD
3	3	5	7-1/2	2NO, 3NC	XTSE009B23A	XTSE009B23TD
3	3	10	10	2NO, 3NC	XTSE012B23A	XTSE012B23TD
1-1/2	2	3	5	1NO, 2NC+1NO, 1NC ①	XTSE007BE23A	XTSE007BE23TD
3	3	5	7-1/2	1NO, 2NC+1NO, 1NC ①	XTSE009BE23A	XTSE009BE23TD
3	3	10	10	1NO, 2NC+1NO, 1NC ①	XTSE012BE23A	XTSE012BE23TD

XTSE\_C\_



5	7-1/2	10	15	2NO, 3NC	XTSE018C23A	XTSE018C23TD
7-1/2	7-1/2	15	20	2NO, 3NC	XTSE025C23A	XTSE025C23TD
10	10	20	25	2NO, 3NC	XTSE032C23A	XTSE032C23TD
5	7-1/2	10	15	1NO, 2NC+1NO, 1NC ①	XTSE018CE23A	XTSE018CE23TD
7-1/2	7-1/2	15	20	1NO, 2NC+1NO, 1NC ①	XTSE025CE23A	XTSE025CE23TD
10	10	20	25	1NO, 2NC+1NO, 1NC ①	XTSE032CE23A	XTSE032CE23TD

XTSE\_D\_



5	7-1/2	10	15	2NO, 3NC	XTSE018C23A	XTSE018C23TD
7-1/2	7-1/2	15	20	2NO, 3NC	XTSE025C23A	XTSE025C23TD
10	10	20	25	2NO, 3NC	XTSE032C23A	XTSE032C23TD
5	7-1/2	10	15	1NO, 2NC+1NO, 1NC ①	XTSE018CE23A	XTSE018CE23TD
7-1/2	7-1/2	15	20	1NO, 2NC+1NO, 1NC ①	XTSE025CE23A	XTSE025CE23TD
10	10	20	25	1NO, 2NC+1NO, 1NC ①	XTSE032CE23A	XTSE032CE23TD

XTSE\_F\_



10	15	30	40	2NO, 2NC	XTSE040D22A	XTSE040D22TD
15	20	40	50	2NO, 2NC	XTSE050D22A	XTSE050D22TD
20	25	40	60	2NO, 2NC	XTSE065D22A	XTSE065D22TD

25	30	60	75	2NO, 2NC	XTSE080F22A	XTSE080F22TD
25	40	75	100	2NO, 2NC	XTSE095F22A	XTSE095F22TD
40	50	100	125	2NO, 2NC	XTSE115G22A	XTSE115G22TD
40	60	125	125	2NO, 2NC	XTSE150G22A	XTSE150G22TD

Note

① 1NO and 1NC electronic compatible.

#### XTOB, XTOT Overload Relays



### Thermal Overload Relays

#### Product Description

The **XT** line of IEC motor thermal overload relays provides an efficient motor protection solution, available up to 630A. XTOB units can be directly mounted to the contactor or mounted separately.

#### Features and Benefits

- Direct connect up to 250A
- Stand alone and CT type up to 630A
- Large thermal overcurrent range
- Test button
- Manual/automatic selectable reset
- NO-NC auxiliary as standard
- Class 10A (to 250A)
- Class 30 (CT type)

### Contents

#### Description

	<i>Page</i>
Relays and Timers .....	<b>V5-T1-3</b>
Miniature Controls .....	<b>V5-T1-18</b>
Contactors and Starters .....	<b>V5-T1-35</b>
XTSE Contactors .....	<b>V5-T1-128</b>
Thermal Overload Relays	
Catalog Number Selection .....	<b>V5-T1-131</b>
Product Selection .....	<b>V5-T1-132</b>
Accessories .....	<b>V5-T1-135</b>
Technical Data and Specifications .....	<b>V5-T1-138</b>
Dimensions .....	<b>V5-T1-140</b>
C440/ <b>XT</b> Electronic Overload Relay .....	<b>V5-T1-143</b>
Manual Motor Protectors .....	<b>V5-T1-159</b>
Combination Motor Controllers .....	<b>V5-T1-193</b>
<b>XT</b> Electronic Manual Motor Protector .....	<b>V5-T1-219</b>
EMS—Electronic Motor Starter .....	<b>V5-T1-232</b>
<b>XT</b> DC Contactors .....	<b>V5-T1-234</b>
Reference Data .....	<b>V5-T1-236</b>

#### Standards and Certifications

- IEC EN 60947
- CE approved
- UL
- CSA
- ATEX
- RoHS



#### Notes

Short-circuit protection: Observe the maximum permissible fuse of the contactor with direct device mounting. See MN03402001E for more information on overload relays for Frames B–G. Trip Class: 10A  
 Suitable for protection of EEx e-motors. EC prototype test certificate available upon request. See manuals MN03402001E and MN03407001E, **Page V5-T1-135**.

#### Instructional Leaflets

- |          |   |
|----------|---|
| Pub51221 | XTOB, D Frame overload relays (inside of packaging)   |
| Pub51222 | XTOB, B–C Frame overload relays (inside of packaging) |

Catalog Number Selection

XT IEC Overload Relays



### Product Selection

#### Frame B

#### Overload Relay, Direct Mount—Frame B



Overload Releases, I <sub>r</sub>	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)		Maximum Circuit Breaker	CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Fuse Type 2 Coordination, gG/gL			
0.1–0.16	97 95	1NO-1NC	7–15A	25	0.5	25	3	<b>XTOBP16BC1</b>
0.16–0.24		1NO-1NC	7–15A	25	1	25	3	<b>XTOBP24BC1</b>
0.24–0.4	2 4 6 98 96 A2 14/ 22	1NO-1NC	7–15A	25	2	25	3	<b>XTOBP40BC1</b>
0.4–0.6		1NO-1NC	7–15A	25	4	25	3	<b>XTOBP60BC1</b>
0.6–1		1NO-1NC	7–15A	25	4	25	3	<b>XTOB001BC1</b>
1–1.6		1NO-1NC	7–15A	25	6	25	6	<b>XTOB1P6BC1</b>
1.6–2.4		1NO-1NC	7–15A	25	10	25	6	<b>XTOB2P4BC1</b>
2.4–4		1NO-1NC	7–15A	25	16	25	15	<b>XTOB004BC1</b>
4–6		1NO-1NC	7–15A	25	20	25	20	<b>XTOB006BC1</b>
6–10		1NO-1NC	7–15A	50	25	25	35	<b>XTOB010BC1</b>
9–12		1NO-1NC	9–15A	50	25	25	45	<b>XTOB012BC1</b>
12–16		1NO-1NC	12–15A	50	25	30	45	<b>XTOB016BC1</b>

#### Frame C

#### Overload Relay, Direct Mount—Frame C



Overload Releases, I <sub>r</sub>	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)		Maximum Circuit Breaker	CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Fuse Type 2 Coordination, gG/gL			
0.1–0.16	97 95	1NO-1NC	18–32A	25	0.5	25	3	<b>XTOBP16CC1</b>
0.16–0.24		1NO-1NC	18–32A	25	1	25	3	<b>XTOBP24CC1</b>
0.24–0.4	2 4 6 98 96 A2 14/ 22	1NO-1NC	18–32A	25	2	25	3	<b>XTOBP40CC1</b>
0.4–0.6		1NO-1NC	18–32A	25	4	25	3	<b>XTOBP60CC1</b>
0.6–1		1NO-1NC	18–32A	25	4	25	3	<b>XTOB001CC1</b>
1–1.6		1NO-1NC	18–32A	25	6	25	6	<b>XTOB1P6CC1</b>
1.6–2.4		1NO-1NC	18–32A	25	10	25	6	<b>XTOB2P4CC1</b>
2.4–4		1NO-1NC	18–32A	25	16	25	15	<b>XTOB004CC1</b>
4–6		1NO-1NC	18–32A	25	20	25	20	<b>XTOB006CC1</b>
6–10		1NO-1NC	18–32A	50	25	25	25	<b>XTOB010CC1</b>
10–16		1NO-1NC	18–32A	63	35	30	25	<b>XTOB016CC1</b>
16–24		1NO-1NC	18–32A	100	35	30	25	<b>XTOB024CC1</b>
24–32		1NO-1NC	25–32A	125	63	30	25	<b>XTOB032CC1</b>
32–38		1NO-1NC	32–38A	125	63	30	25	<b>XTOB032CC1</b>

## XTSE Contactor



## XTSE Contactors

### Product Description

Eaton XTSE safety contactors are designed with the OEM and end customer in mind.

Providing enhanced levels of safety, XTSE contactors integrate to applications to not only achieve the highest safety circuits, but provide additional levels of protection that reinforce end-user safety.

### Application Description

With offerings up to 150 A and 125 hp, XTSE contactors were engineered to provide highly effective control and protection for motors, compressors and pumps, etc. XTSE contactors can be used in safety applications according to EN 954-1, EN ISO 13849-1 and IEC 62061 up to Category 4, PI e and SIL 3. Information concerning safety-related characteristics (B10 and B10d values) is available online. The auxiliary contact modules and built-in auxiliary contacts meet IEC EN 60947-5-1 Annex L (positively driven) and IEC EN 60947-4-1 Annex F (mirror contacts).

## Contents

### Description

	<i>Page</i>
Relays and Timers .....	<b>V5-T1-3</b>
Miniature Controls .....	<b>V5-T1-18</b>
Contactors and Starters .....	<b>V5-T1-35</b>
XTSE Contactors	
Catalog Number Selection .....	<b>V5-T1-129</b>
Product Selection .....	<b>V5-T1-129</b>
Thermal Overload Relays .....	<b>V5-T1-130</b>
C440/XT Electronic Overload Relay .....	<b>V5-T1-143</b>
Manual Motor Protectors .....	<b>V5-T1-159</b>
Combination Motor Controllers .....	<b>V5-T1-193</b>
XT Electronic Manual Motor Protector .....	<b>V5-T1-219</b>
EMS—Electronic Motor Starter .....	<b>V5-T1-232</b>
XT DC Contactors .....	<b>V5-T1-234</b>
Reference Data .....	<b>V5-T1-236</b>

### Features and Benefits

#### Clear Inspection Window

- The clear inspection window located on top of the auxiliary contact prevents the contactor from being manually activated and also allows for safe status monitoring for the user

#### Rated for Highest Safety Characteristics

- XTSE contactors are able to integrate to safety circuits for up to category 4, PI e and SIL 3 applications
- SUVA Certified

#### Safety Agency Approval

- Integrated front-mounted auxiliary contacts
- XTSE contactors utilize a new enhanced latching mechanism to prevent removal of the auxiliary contact

### Standards and Certifications

- CE Approved
- UL Listed
- IEC/EN 60947-4-1, 60947-5-1
- CSA Listed



Catalog Number Selection

XTSE Contactors



Product Selection

XTSRE10B



XTSE Safety Relay

Conventional Thermal Current $I_{th}$ (A)	Rated Operational Current AC-15 $I_e$ (A)			Auxiliary Contacts	Coil Voltage	
	220–240 V	380–415 V	500 V		110 V, 50 Hz; 120 V, 60 Hz	24 Vdc
16	6	4	1.5	4NO, 4NC	XTSRE10B44A	XTSRE10B44TD
16	6	4	1.5	3NO, 3NC+1NO, 1NC ①	XTSRE10BE44A	XTSRE10BE44TD

XTSE Safety Contactor

XTSE\_B\_



Horsepower Rating (hp), Three-Phase 200/208 V	230/240 V	460/480 V	575/600 V	Auxiliary Contacts	Coil Voltage	
					110 V, 50 Hz; 120 V, 60 Hz	24 Vdc
1-1/2	2	3	5	2NO, 3NC	XTSE007B23A	XTSE007B23TD
3	3	5	7-1/2	2NO, 3NC	XTSE009B23A	XTSE009B23TD
3	3	10	10	2NO, 3NC	XTSE012B23A	XTSE012B23TD
1-1/2	2	3	5	1NO, 2NC+1NO, 1NC ①	XTSE007BE23A	XTSE007BE23TD
3	3	5	7-1/2	1NO, 2NC+1NO, 1NC ①	XTSE009BE23A	XTSE009BE23TD
3	3	10	10	1NO, 2NC+1NO, 1NC ①	XTSE012BE23A	XTSE012BE23TD

XTSE\_C\_



5	7-1/2	10	15	2NO, 3NC	XTSE018C23A	XTSE018C23TD
7-1/2	7-1/2	15	20	2NO, 3NC	XTSE025C23A	XTSE025C23TD
10	10	20	25	2NO, 3NC	XTSE032C23A	XTSE032C23TD
5	7-1/2	10	15	1NO, 2NC+1NO, 1NC ①	XTSE018CE23A	XTSE018CE23TD
7-1/2	7-1/2	15	20	1NO, 2NC+1NO, 1NC ①	XTSE025CE23A	XTSE025CE23TD
10	10	20	25	1NO, 2NC+1NO, 1NC ①	XTSE032CE23A	XTSE032CE23TD

XTSE\_D\_



5	7-1/2	10	15	2NO, 3NC	XTSE018C23A	XTSE018C23TD
7-1/2	7-1/2	15	20	2NO, 3NC	XTSE025C23A	XTSE025C23TD
10	10	20	25	2NO, 3NC	XTSE032C23A	XTSE032C23TD
5	7-1/2	10	15	1NO, 2NC+1NO, 1NC ①	XTSE018CE23A	XTSE018CE23TD
7-1/2	7-1/2	15	20	1NO, 2NC+1NO, 1NC ①	XTSE025CE23A	XTSE025CE23TD
10	10	20	25	1NO, 2NC+1NO, 1NC ①	XTSE032CE23A	XTSE032CE23TD

XTSE\_F\_



10	15	30	40	2NO, 2NC	XTSE040D22A	XTSE040D22TD
15	20	40	50	2NO, 2NC	XTSE050D22A	XTSE050D22TD
20	25	40	60	2NO, 2NC	XTSE065D22A	XTSE065D22TD

25	30	60	75	2NO, 2NC	XTSE080F22A	XTSE080F22TD
25	40	75	100	2NO, 2NC	XTSE095F22A	XTSE095F22TD
40	50	100	125	2NO, 2NC	XTSE115G22A	XTSE115G22TD
40	60	125	125	2NO, 2NC	XTSE150G22A	XTSE150G22TD

Note

① 1NO and 1NC electronic compatible.

#### XTOB, XTOT Overload Relays



### Thermal Overload Relays

#### Product Description

The **XT** line of IEC motor thermal overload relays provides an efficient motor protection solution, available up to 630A. XTOB units can be directly mounted to the contactor or mounted separately.

#### Features and Benefits

- Direct connect up to 250A
- Stand alone and CT type up to 630A
- Large thermal overcurrent range
- Test button
- Manual/automatic selectable reset
- NO-NC auxiliary as standard
- Class 10A (to 250A)
- Class 30 (CT type)

### Contents

#### Description

	<i>Page</i>
Relays and Timers .....	<b>V5-T1-3</b>
Miniature Controls .....	<b>V5-T1-18</b>
Contactors and Starters .....	<b>V5-T1-35</b>
XTSE Contactors .....	<b>V5-T1-128</b>
Thermal Overload Relays	
Catalog Number Selection .....	<b>V5-T1-131</b>
Product Selection .....	<b>V5-T1-132</b>
Accessories .....	<b>V5-T1-135</b>
Technical Data and Specifications .....	<b>V5-T1-138</b>
Dimensions .....	<b>V5-T1-140</b>
C440/ <b>XT</b> Electronic Overload Relay .....	<b>V5-T1-143</b>
Manual Motor Protectors .....	<b>V5-T1-159</b>
Combination Motor Controllers .....	<b>V5-T1-193</b>
<b>XT</b> Electronic Manual Motor Protector .....	<b>V5-T1-219</b>
EMS—Electronic Motor Starter .....	<b>V5-T1-232</b>
<b>XT</b> DC Contactors .....	<b>V5-T1-234</b>
Reference Data .....	<b>V5-T1-236</b>

#### Standards and Certifications

- IEC EN 60947
- CE approved
- UL
- CSA
- ATEX
- RoHS



#### Notes

Short-circuit protection: Observe the maximum permissible fuse of the contactor with direct device mounting. See MN03402001E for more information on overload relays for Frames B–G. Trip Class: 10A  
 Suitable for protection of EEx e-motors. EC prototype test certificate available upon request. See manuals MN03402001E and MN03407001E, **Page V5-T1-135**.

#### Instructional Leaflets

- |          |   |
|----------|---|
| Pub51221 | XTOB, D Frame overload relays (inside of packaging)   |
| Pub51222 | XTOB, B–C Frame overload relays (inside of packaging) |



Catalog Number Selection

XT IEC Overload Relays



### Product Selection

#### Frame B

#### Overload Relay, Direct Mount—Frame B



Overload Releases, I <sub>r</sub>	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)		Maximum Circuit Breaker	CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Fuse Type 2 Coordination, gG/gL			
0.1–0.16	97 95	1NO-1NC	7–15A	25	0.5	25	3	XTOBP16BC1
0.16–0.24		1NO-1NC	7–15A	25	1	25	3	XTOBP24BC1
0.24–0.4		1NO-1NC	7–15A	25	2	25	3	XTOBP40BC1
0.4–0.6		1NO-1NC	7–15A	25	4	25	3	XTOBP60BC1
0.6–1		1NO-1NC	7–15A	25	4	25	3	XTOB001BC1
1–1.6		1NO-1NC	7–15A	25	6	25	6	XTOB1P6BC1
1.6–2.4		1NO-1NC	7–15A	25	10	25	6	XTOB2P4BC1
2.4–4		1NO-1NC	7–15A	25	16	25	15	XTOB004BC1
4–6		1NO-1NC	7–15A	25	20	25	20	XTOB006BC1
6–10		1NO-1NC	7–15A	50	25	25	35	XTOB010BC1
9–12		1NO-1NC	9–15A	50	25	25	45	XTOB012BC1
12–16		1NO-1NC	12–15A	50	25	30	45	XTOB016BC1

#### Frame C

#### Overload Relay, Direct Mount—Frame C



Overload Releases, I <sub>r</sub>	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)		Maximum Circuit Breaker	CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Fuse Type 2 Coordination, gG/gL			
0.1–0.16	97 95	1NO-1NC	18–32A	25	0.5	25	3	XTOBP16CC1
0.16–0.24		1NO-1NC	18–32A	25	1	25	3	XTOBP24CC1
0.24–0.4		1NO-1NC	18–32A	25	2	25	3	XTOBP40CC1
0.4–0.6		1NO-1NC	18–32A	25	4	25	3	XTOBP60CC1
0.6–1		1NO-1NC	18–32A	25	4	25	3	XTOB001CC1
1–1.6		1NO-1NC	18–32A	25	6	25	6	XTOB1P6CC1
1.6–2.4		1NO-1NC	18–32A	25	10	25	6	XTOB2P4CC1
2.4–4		1NO-1NC	18–32A	25	16	25	15	XTOB004CC1
4–6		1NO-1NC	18–32A	25	20	25	20	XTOB006CC1
6–10		1NO-1NC	18–32A	50	25	25	25	XTOB010CC1
10–16		1NO-1NC	18–32A	63	35	30	25	XTOB016CC1
16–24		1NO-1NC	18–32A	100	35	30	25	XTOB024CC1
24–32		1NO-1NC	25–32A	125	63	30	25	XTOB032CC1
32–38		1NO-1NC	32–38A	125	63	30	25	XTOB032CC1