

## 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)

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## 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

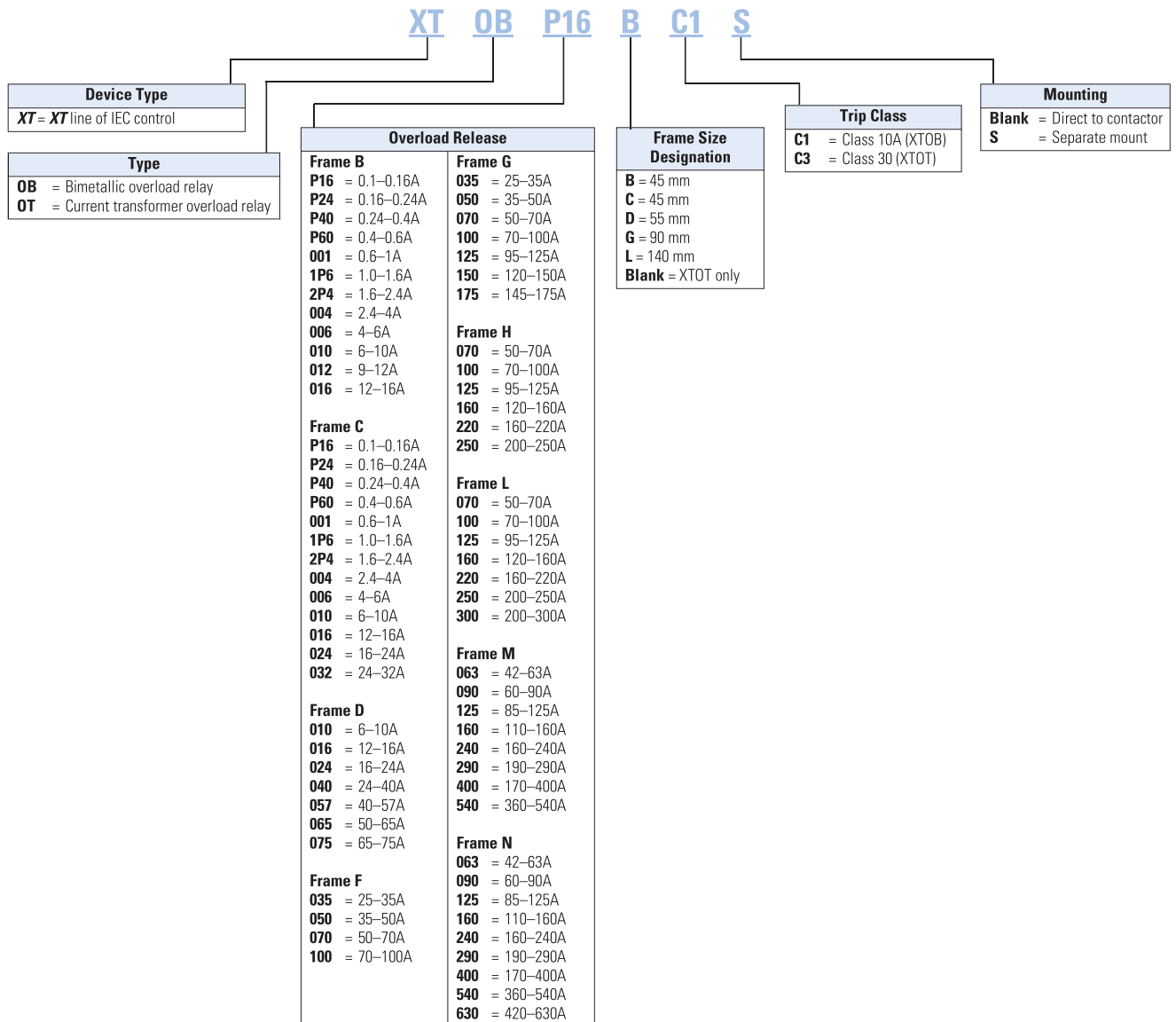
Suitable for protection of EEx e-motors. EC prototype test certificate available upon request. See manuals MN03402001E and MN03407001E, **Page V5-T1-135**.

## 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)			CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Type 2 Coordination, gG/gL	Maximum Circuit Breaker		
0.1–0.16		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		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)			CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Type 2 Coordination, gG/gL	Maximum Circuit Breaker		
0.1–0.16		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		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>	

## Frame D

## Overload Relay, Direct Mount—Frame D



Overload Releases, I <sub>r</sub>	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)			CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Fuse Type 2 Coordination, gG/gL	Maximum Circuit Breaker		
6–10		1NO-1NC	40–72A	50	25	25	25	XTOB010DC1
10–16		1NO-1NC	40–72A	63	35	25	25	XTOB016DC1
16–24		1NO-1NC	40–72A	63	50	30	25	XTOB024DC1
24–40		1NO-1NC	40–72A	125	63	125	125	XTOB040DC1
40–57		1NO-1NC	50–72A	160	80	150	150	XTOB057DC1
50–65		1NO-1NC	65–72A	160	100	150	200	XTOB065DC1
65–75		1NO-1NC	72A	200	125	150	200	XTOB075DC1

## Frames F–G

## Overload Relay, Direct Mount—Frames F–G



Overload Releases, I <sub>r</sub>	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)			CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Fuse Type 2 Coordination, gG/gL	Maximum Circuit Breaker		
25–35		1NO-1NC	80–170A	125	100	125	125	XTOB035GC1
35–50		1NO-1NC	80–170A	160	125	150	200	XTOB050GC1
50–70		1NO-1NC	80–170A	250	160	150	200	XTOB070GC1
70–100		1NO-1NC	80–170A	315	200	400	400	XTOB100GC1
95–125		1NO-1NC	80–170A	315	200	500	400	XTOB125GC1
120–150		1NO-1NC	80–170A	315	200	600	600	XTOB150GC1
145–175		1NO-1NC	150–170A	315	200	600	600	XTOB175GC1

## Frames F–G

## Overload Relay, Separate Mount—Frames F–G



Overload Releases, I <sub>r</sub>	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)			CEC/NEC Fuse	Catalog Number
				Fuse Type 1 Coordination, gG/gL	Fuse Type 2 Coordination, gG/gL	Maximum Circuit Breaker		
25–35		1NO-1NC	80–170A	125	100	125	125	XTOB035GC1S
35–50		1NO-1NC	80–170A	160	125	150	200	XTOB050GC1S
50–70		1NO-1NC	80–170A	250	160	150	200	XTOB070GC1S
70–100		1NO-1NC	80–170A	315	200	400	400	XTOB100GC1S
95–125		1NO-1NC	80–170A	315	250	500	400	XTOB125GC1S
120–150		1NO-1NC	80–170A	315	250	600	600	XTOB150GC1S
145–175		1NO-1NC	150–170A	315	250	600	600	XTOB175GC1S

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#### Frame H



#### Overload Relay, Separate Mount—Frame H

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			
50–70	1 3 5 97 95	1NO-1NC	185–250A	250	160	150	200	XTOB070HC1
70–100	1 3 5 97 95	1NO-1NC	185–250A	315	200	400	400	XTOB100HC1
95–125	2 4 6 98 96	1NO-1NC	185–250A	315	250	500	400	XTOB125HC1
120–160		1NO-1NC	185–250A	400	250	600	600	XTOB160HC1
160–220		1NO-1NC	185–250A	400 <sup>①</sup>	315 <sup>①</sup>	600	800	XTOB220HC1
200–250		1NO-1NC	225–250A	400 <sup>①</sup>	315 <sup>①</sup>	600	700	XTOB250HC1

#### Frame L



#### Overload Relay, Separate Mount—Frame L

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			
50–70	1 3 5 97 95	1NO-1NC	185–250A	250	160	150	200	XTOB070LC1
70–100	1 3 5 97 95	1NO-1NC	185–250A	315	200	400	400	XTOB100LC1
95–125	2 4 6 98 96	1NO-1NC	185–250A	315	250	500	400	XTOB125LC1
120–160		1NO-1NC	185–250A	400	250	600	600	XTOB160LC1
160–220		1NO-1NC	185–250A	400 <sup>①</sup>	315 <sup>①</sup>	600	800	XTOB220LC1
200–250		1NO-1NC	225–250A	400 <sup>①</sup>	315 <sup>①</sup>	600	700	XTOB250LC1
200–300		1NO-1NC	225–300A	630 <sup>①</sup>	630 <sup>①</sup>	600	700	XTOB300LC1

#### Frames M-N



#### Current Transformer Operated Overload Relays, Separate Mount—Frames M-N<sup>②</sup>

Overload Releases, I <sub>r</sub>	Contact Sequence	Contact Configuration	For Use with Contactor Amp Range	Short-Circuit Protection (A)		Circuit Breaker	CEC/NEC Fuse	Catalog Number
				Type 1 Coordination, gG/gL	Type 2 Coordination, gG/gL			
42–63	97 95	1NO-1NC	300–500A	—	—	150	200	XTOT063C3S
60–90	97 95	1NO-1NC	300–500A	—	—	250	250	XTOT090C3S
85–125	97 95	1NO-1NC	300–500A	—	—	500	400	XTOT125C3S
110–160	97 95	1NO-1NC	300–500A	—	—	600	600	XTOT160C3S
160–240	97 95	1NO-1NC	300–500A	—	—	600	700	XTOT240C3S
190–290	97 95	1NO-1NC	300–500A	—	—	600	700	XTOT290C3S
270–400	97 95	1NO-1NC	300–500A	—	—	1000	1000	XTOT400C3S
360–540	97 95	1NO-1NC	500A	—	—	600	1000	XTOT540C3S
420–630 <sup>③</sup>	97 95	1NO-1NC	630A	—	—	600	1000	XTOT630C3S

#### Notes

- ① For separate mounting, short-circuit Type 1 rating is 500A and short-circuit Type 2 rating is 400A.
- ② The main current parameters are defined by the main current wiring that is used.
- ③ Recommend busbar solution at 600A, 1.06 diameter CT openings.

## Accessories

## XTOBXDIN\_


**DIN Rail or Panel Mount Adapter,  
Frames C-D** <sup>①</sup>

For Use with...	Pkg. Qty. <sup>②</sup>	Catalog Number
XTOB...CC1	5	XTOBXDINC
XTOB...DC1	2	XTOBXDIND

**Terminal Shroud**

For Use with...	Catalog Number
XTOB...LC1	XTOBXTSL

## XTOBXTSL



XTOB...HC1	XTOBXTSCH
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## XTOBXTSCL



XTOB...LC1 to XTCE250L or XTCE300L	XTOBXTSCL
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**Terminal Lug Kit—Set of Three Lugs**

Description	For Use with...	Pkg. Qty. <sup>②</sup>	Catalog Number
#6 AWG-350 kcmil	XTOB...LC1	1	XTOBXTLL

**Documentation—Manuals for Overload Monitoring  
of EEX e-motors**

Publication Number	For Use with...
MN03402001E	XTOB...BC1 XTOB...CC1
MN03407001E	XTOB...DC1 XTOB...GC1

**Notes**

- ① Can be snap fitted on a top hat rail (DIN rail) to IEC/EN 60715 or can be screw fitted.
- ② Orders must be placed in multiples of package quantity listed.