Malux solutions

CEAG Products
Ex-Solutions LED Lighting

CROUSE-HINDS SERIES

eLLK 92 LED Light Fittings

Linear light fitting series with new LED module

for hazardous areas Zone 1, 2, 21 and 22

EATON
Powering Business Worldwide

Ex-LED-Linear light fitting

eLLK/M 92 LED 400A / eLLK/M 92 LED 800A / eLLK/M 92 LED 400A NE / eLLK 92 LED 800A NE
(Zone 1, 2, 21, 22)

The efficient solution for your explosion-protected lighting concept

The explosion-protected linear light fittings series eLLK/M 92 LED 400A/800A combines the latest LED technology with the protection of a reliable housing solution. As a result, this light fitting series is the ideal solution for lighting tasks in harsh and hazardous environments.

Latest lighting technology for a proven lighting concept

As a leading manufacturer of explosion-protected luminaires, we have redesigned our revolutionary LED module to fit into the eLLK/M... linear light fitting series.

With the new Gen2 modules, our LED linear luminaires are even more efficient and brighter than before. In addition, they now also have an extended temperature range from-25 °C to +55 °C. The new eLLK-2/4-C/W LED module can also be used for converting existing eLLK/M 92 light fittings with fluorescent lamps and an electronic ballast (EVG 09) into LED linear light fittings in just few simple steps.

The LED system design and certification allow the use in the proved Ex e technology of the eLLK/M 92 light fittings. With the use of our electronic ballast EVG 09 as the driver, we can rely on more than 20 years successful and safe operation in harsh and hazardous environments.

The advantages of the LED module:

- Environmentally friendly, no mercury
- Shock and vibration resistant, no filament or glass to break
- Immediate start, instant full illumination
- No life time reduction due to switching cycles
- Reduced disposal costs

Energy and cost savings

- >20% energy savings compared to fluorescent lamps
- Additional energy savings due to operation on demand (night/day and presence-mode)
- Reduced maintenance costs compared to standard fluorescent lamps
- Lower overall cost of ownership

Operating life

- The expected operating life of this LED module is up to 110,000 hours. This is a significant improvement compared to traditional light sources.
- Heat sinks are specifically engineered to remove heat from the LEDs to ensure a longer life, better lumen output and accurate colour temperature.
- Fully operational with V-CG-S modules for connection to CEAG central battery emergency lighting systems.
- Also available as self-contained emergency luminaire eLLK 92 LED ... NE.

Easy and cost-effective installation

Like all the luminaires in the eLLK lighting family, our standard LED linear luminaires feature a single-ended through-wiring, which, in conjunction with the generously dimensioned terminal compartment, allows a cost-effective installation. The double-sided locking facility with 10 or 20 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

Features

- >20 % energy savings compared to similar fluorescent luminaires
- Special LED design with direct light distribution
- Proved technology. The EVG 09 has been used as a driver for more than 20 years
- Various light colour temperatures available - 4000 K / 5700 K
- Selected LED chips with perfect binning, low power loss and long life
- Ex-e technology for easy maintenance
- For ambient temperatures from -25 °C up to +55 °C

Ordering details

eLLK/M 92 LED 400A/800A

Ordering details

Type	Version	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No for 4000 K	Order No for 5700 K
eLLK 92 LED 400A									
eLLK 92 LED 400A	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	**1 2265 505 101**	**1 2265 504 101**
eLLK 92 LED 400A	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2265 505 103**	**1 2265 504 103**
eLLK 92 LED 400A	1/6-1M [1]	1 x 6	x	–	2 x M20, Metal thread	1 x M20		**1 2265 505 109**	**1 2265 504 109**
eLLK 92 LED 400A	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M20		**1 2265 505 111**	**1 2265 504 111**
eLLK 92 LED 800A									
eLLK 92 LED 800A	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	**1 2266 505 101**	**1 2266 504 101**
eLLK 92 LED 800A	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2266 505 103**	**1 2266 504 103**
eLLK 92 LED 800A	1/6-1M [1]	1 x 6	x	–	2 x M20, Metal thread	1 x M20		**1 2266 505 109**	**1 2266 504 109**
eLLK 92 LED 800A	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M20		**1 2266 505 111**	**1 2266 504 111**
eLLM 92 LED 400A/800A									
eLLM 92 LED 400A	1/3-1K	1 x 3	–	–	1 x M25, Plastic			**1 2268 505 101**	**1 2268 504 101**
eLLM 92 LED 800A	1/3-1K	1 x 3	–	–	1 x M25, Plastic			**1 2269 505 101**	**1 2269 504 101**
eLLK 92 LED 400 V-CG-S [2]									
eLLK 92 LED 400 V-CG-S	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2265 517 103**	**1 2265 516 103**
eLLK 92 LED 400 V-CG-S	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M25		**1 2265 517 111**	**1 2265 516 111**
eLLK 92 LED 800 V-CG-S [2]									
eLLK 92 LED 800 V-CG-S	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2266 517 103**	**1 2266 516 103**
eLLK 92 LED 800 V-CG-S	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M25		**1 2266 517 111**	**1 2266 516 111**
eLLK 92 LED 400A NE [3]									
eLLK 92 LED 400A NE	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	**1 2260 588 101**	**1 2260 587 101**
eLLK 92 LED 400A NE	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2260 588 103**	**1 2260 587 103**
eLLK 92 LED 400A NE	1/6-1M [1]	1 x 6	x	–	2 x M20, Metal thread	1 x M20		**1 2260 588 109**	**1 2260 587 109**
eLLK 92 LED 400A NE	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M20		**1 2260 588 111**	**1 2260 587 111**
eLLK 92 LED 400A NE	1/6-1M [1]	1 x 6	x	–	2 x M25, Metal thread	2 x M25		**1 2260 588 609**	**1 2260 587 609**
eLLK 92 LED 400A NE	2/6-2M [1]	2 x 6	–	x	4 x M25, Metal thread	4 x M25		**1 2260 588 611**	**1 2260 587 611**
eLLK 92 LED 800A NE [3]									
eLLK 92 LED 800A NE	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	**1 2261 588 101**	**1 2261 587 101**
eLLK 92 LED 800A NE	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2261 588 103**	**1 2261 587 103**
eLLK 92 LED 800A NE	1/6-1M [1]	1 x 6	x	–	2 x M20, Metal thread	1 x M20		**1 2261 588 109**	**1 2261 587 109**
eLLK 92 LED 800A NE	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M20		**1 2261 588 111**	**1 2261 587 111**
eLLK 92 LED 800A NE	1/6-1M [1]	1 x 6	x	–	2 x M25, Metal thread	2 x M25		**1 2261 588 609**	**1 2261 587 609**
eLLK 92 LED 800A NE	2/6-2M [1]	2 x 6	–	x	4 x M25, Metal thread	4 x M25		**1 2261 588 611**	**1 2261 587 611**
eLLM 92 LED 400A NE [3]									
eLLM 92 LED 400A NE	1/3-1K	1 x 3	–	–	1 x M25, Plastic			**1 2273 588 101**	**1 2273 587 101**

Scope of delivery including LED-module, without fixing material. Metal cable glands see catalogue part 2: 2.3.12 ff

1) with metal thread, without cable gland / 2) for operation with CEAG-emergency supply system / 3) self-contained emergency light fitting

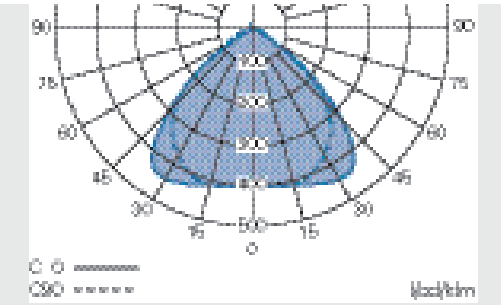
Accessories

Type		Order No for 4000 K	Order No for 5700 K
eLLK-2-x	LED module for eLLK/M 92 018/18 incl. conversion kit for standard fluorescent light fittings	**CCL 1635 129**	**CCL 1635 127**
eLLK-4-x	LED module for eLLK/M 92 036/36 incl. conversion kit for standard fluorescent light fittings	**CCL 1635 130**	**CCL 1635 128**
eLLK-2-x	LED module for eLLK/M 92 018/18 LED Ready / eLLK 92 LED 400A	**CCL 1634 699**	**CCL 1634 697**
eLLK-4-x	LED module for eLLK/M 92 036/36 LED Ready / eLLK 92 LED 800A	**CCL 1634 700**	**CCL 1634 698**
Diffuser	Diffuser Cover for ellk 400A (1pc needed) or ellk 800A (2pcs needed)	**CHLPL1403-01**	
eLLK-2-x-F	LED module for eLLK/M 92 018/18 incl. conversion kit for standard fluorescent light fittings with diffuser	**CCL 1666 002**	**CCL 1666 000**
eLLK-4-x-F	LED module for eLLK/M 92 036/36 incl. conversion kit for standard fluorescent light fittings with diffuser	**CCL 1666 003**	**CCL 1666 001**
eLLK-2-x-F	LED module for eLLK/M 92 018/18 LED Ready / eLLK 92 LED 400A with diffuser	**CCL 1666 006**	**CCL 1666 004**
eLLK-4-x-F	LED module for eLLK/M 92 036/36 LED Ready / eLLK 92 LED 800A with diffuser	**CCL 1666 007**	**CCL 1666 005**

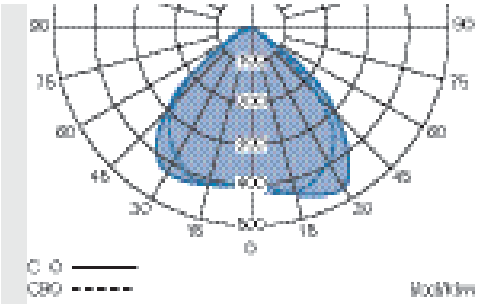
Polar curve / Dimension drawing

eLLK/M 92 LED 400A/800A / NE

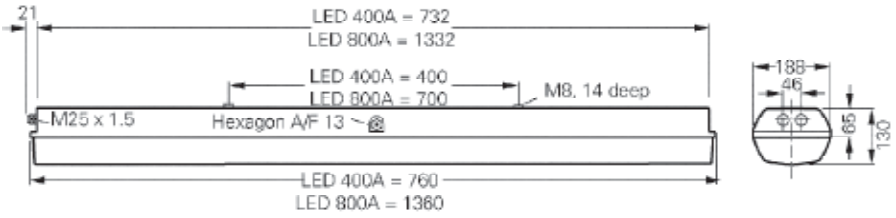
Polar curve eLLK/M 92 LED 400A/800A



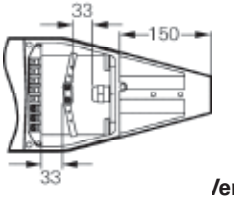
Polar curve eLLK/M 92 LED 400A/800A NE in emergency mode



eLLK 92 LED 400A/800A

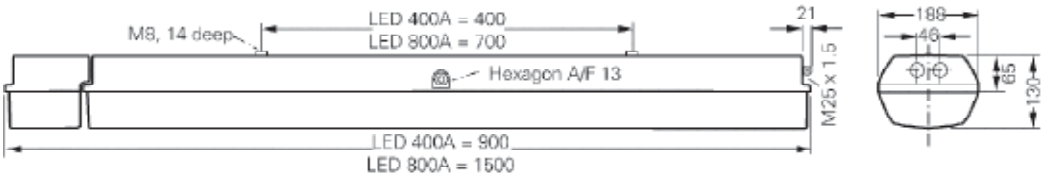


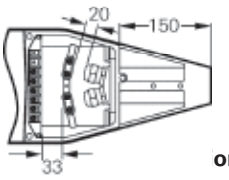
eLLM 92...



/ersion 1/3

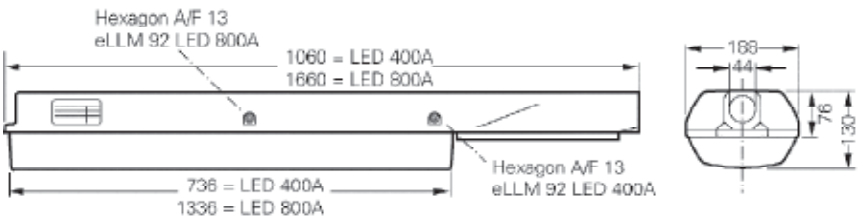
eLLK 92 LED 400A/800A NE





on 2/6

eLLM 92 LED 400A/800A



Dimensions in mm

Technical data

eLLK 92 LED 400A/800A

Technical data

	eLLK/M 92 LED 400A	eLLK/M 92 LED 800A
EC-Type Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66
Marking accd. to IECEx	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C	-25 °C up to +55 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	110 V - 254 V AC 110 V - 250 V DC	110 V - 254 V AC 110 V - 250 V DC
Power consumtion	29 W	57 W
Frequency	50 - 60 Hz	50 - 60 Hz
Life expectancy LED module	L 70 = 110.000 h at ta=25 °C	L 70 = 110.000 h at ta=25 °C
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Immunity to surge voltages according to EN 61000-4-5	4 kV, L - N and L - PE	4 kV, L - N and L - PE
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 80	> 80
Lamp / Illuminant	ellk-2-C - 2 x 13 W	ellk-2-C - 2 x 26 W
Light colour	5700K/4000K	5700K/4000K
Rated luminous flux of the luminaire (typical, ± 10 %) [2]	2700 lm (5700 K) / 2565 lm (4000 K)	5350 lm (5700 K) / 5085 lm (4000 K)
Dimensions (L x W x H)	760 x 188 x 130 mm (eLLK) 1060 x 188 x 130 mm (eLLM)	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	7.2 kg (eLLK) / 9.2 kg (eLLM)	11.1 kg (eLLK) / 13.1 kg (eLLM)
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal th'ead1)	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal th'ead1)
Degree of protection accd. to EN 60529	IP66/IP67	IP66/IP67
Protective cover / protective bowl	Polycarbonat	Polycarbonat

[1] with dustcover if entry/thread is not closed

[2] ~15% less output with optional diffuser

Technical data

eLLK 92 LED 400A V-CG-S / eLLK 92 LED 800A V-CG-S

Technical data

	eLLK 92 LED 400A V-CG-S	eLLK 92 LED 800A V-CG-S
EC-Tye Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking to 2014/34/EU	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66
Marking to IECEx	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +50 °C	-25 °C up to +50 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC 195 - 250 V DC	220 - 254 V AC 195 - 250 V DC
Power consumtion	29 W	57 W
Frequency	50 - 60 Hz	50 - 60 Hz
Lifetime LED module	L 70 = 110.000 h at ta=25 °C	L 70 = 110.000 h at ta=25 °C
Power factor cos φ	≥ 0,95	≥ 0,95
Circuit	EVG/V-CG-S	EVG/V-CG-S
Insulation class	I	I
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 80	> 80
Lamp/Illuminant	eIlk-2-C - 2 x 13 W	eIlk-4-C - 2 x 26 W
Light colour	5700K/4000K	5700K/4000K
Rated luminous flux of the luminaire [2] (typical, ± 10 %)	2700 lm (5700 K) / 2565 lm (4000 K)	5350 lm (5700 K) / 5085 lm (4000 K)
Rated luminous flux in emergency operation of the luminaire (one LED-row) [2]	1350 lm (5700 k) / 1282 lm (4000 K)	2675 lm (5700 k) / 2542 lm (4000 K)
Rated emergency operating time	-	-
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	7.6 kg	11.5 kg
Cable glands / Gland plates / Enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal th'ead1)	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal th'ead1)
Degree of protection accd. EN 60529	IP66/IP67	IP66/IP67
Protective cover / protective bowl	Polycarbonat	Polycarbonat

[1] With dustcover if entry/thread is not closed

[2] ~15% less output with optional diffuser

Technical data

eLLK/M 92 LED 400A NE / eLLK 92 LED 800A NE

Technical data

	eLLK/M 92 LED 400A NE	eLLK 92 LED 800A NE
EC-Tye Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking to 2014/34/EU	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66
Marking to IECEx	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C (specified data: -5 °C up to +35 °C)	-25 °C up to +55 °C (specified data: -5 °C up to +35 °C)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Battery	Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor	Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor
Rated voltage	120 V - 254 V AC	120 V - 254 V AC
Power consumtion	34 W	62 W
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 14 h	≥ 14 h
Lifetime LED module	L 70 = 110.000 h at ta=25 °C	L 70 = 110.000 h at ta=25 °C
Power factor cos φ	≥ 0,95	≥ 0,95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Insulation class	I	I
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 80	> 80
Lamp/Illuminant	eIlk-2-C - 2 x 13 W	eIlk-4-C - 2 x 26 W
Light colour	5700K/4000K	5700K/4000K
Rated luminous flux of the luminaire[2] (typical, ± 10 %)	2700 lm (5700 K) / 2565 lm (4000 K)	5350 lm (5700 K) / 5085 lm (4000 K)
Rated luminous flux in emergency operation of the luminaire (one LED-row) 1,5 h[2]	1282 lm (5700 k) / 1217 lm (4000 K)	1739 lm (5700 k) / 1653 lm (4000 K)
Rated luminous flux in emergency operation of the luminaire (one LED-row) 3 h[2]	877 lm (5700 k) / 834 lm (4000 K)	1204 lm (5700 k) / 1144 lm (4000 K)
Rated emergency operating time	1,5 h or 3 h, adjustable on site	1,5 h or 3 h, adjustable on site
luminous flux ratio normal/emergency operation (one LED row)	95 % (1,5 h) - 65 % (3 h)	65 % (1,5 h) - 45 % (3 h)
Dimensions (L x W x H)	900 x 188 x 130 mm / 1500 x 188 x 130 mm	900 x 188 x 130 mm / 1500 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	10.3 kg	14.4 kg
Cable glands / Gland plates / Enclosure drilling	Ex-e-cable glands M25 x 1,5 (plastic), option: M20 x 1,5 metal thread [1]	Ex-e-cable glands M25 x 1,5 (plastic), option: M20 x 1,5 metal thread [1]
Degree of protection accd. EN 60529	IP66/IP67	IP66/IP67
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] With dustcover if entry/thread is not closed

Eaton's Crouse-Hinds Business

The safety you rely on.

See the complete offering of Hazardous and Industrial Products at www.crouse-hinds.de.

U.S. (Global Headquarters): Eaton's Crouse-Hinds Business

1201 Wolf Street
Syracuse, NY 13208

(866) 764-5454
FAX: (315) 477-5179
FAX Orders Only:
(866) 653-0640

CrouseCustomerCTR@Eaton.com

For more information:
If further assistance is required, please contact an authorized Eaton Distributor, Sales Office, or Customer Service Department.

Australia
Phone +61-2-8787-2777
Fax +61-2-9609-2342
crousehindsanz@eaton.com

China
Phone +86-21-2899-3600
Fax +86-21-2899-4055
ECHsales@eaton.com

Great Britain
Phone +44-247-630-89 30
Fax +44-247-630-10 27
sales5@eaton.com

India
Phone +91-124-4683888
Fax +91-124-4683899
cchindia@eaton.com

Canada
Toll Free +1-800-265-0502
Fax +1-800-263-9504
Fax orders only:
+1-866-653-0645

Korea
Phone +82-2-3484-6783
Fax +82-2-3484-6778
CCHK-sales@
cooperindustries.com

Mexico/Latin America/ Caribbean
Phone +52-555-804-4000
Fax +52-555-804-4020
mxmercadotecnia@
cooperindustries.com

Spain
Phone +34-9-37362710
Fax +34-9-37835055
sales.CCH.es@
cooperindustries.com

Middle East (Dubai)
Phone +971-4-427-2522 / 2500
Fax +971-4-429-8521
CHMEsales@Eaton.com

The Netherlands
Phone +31-10-2452145
Fax +31-10-2452121
CHRD_mail@Eaton.com

Norway
Phone +47-32-244600
Fax +47-32-244646
CHLIoffice@eaton.com

Singapore:
Phone +65-6645-9888
Fax +65-6297-4819
CHSI-Sales@Eaton.com

Turkey
Phone +90-216-464-20-20
Fax +90-216-464-20-10
infoEGTurkey@eaton.com

Russia
Phone +7-495 510-24-27
Fax +7-495 510-24-28
info@cooper.ru.com
www.cooper-russia.ru

Eaton's Crouse-Hinds Business
Neuer Weg – Nord 49
D-69412 Eberbach

Phone +49 (0) 6271/806-500
Fax +49 (0) 6271/806-476
E-mail info-ex@eaton.com
Internet www.crouse-hinds.de

Powering Business Worldwide

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Printed in Germany
Publication No. BR 300 8000
November 2019

Eaton's Crouse-Hinds Business
1201 Wolf Street
Syracuse, NY 13208
(866) 764-5454
CrouseCustomerCTR@Eaton.com