

**AMG ELM-1F EX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)

Similar to illustration

Efficient machine and facility operation calls for fail-safe and maintenance-friendly control voltage distribution that can be installed in a time and space-saving manner.

With the new maxGUARD system, the terminal blocks (previously installed separately) for distributing potential to the outputs of the electronic load monitors become an integral part of a 24 V DC control voltage distribution system.

The innovative combination of load monitoring and potential distribution saves time during installation, increases safety against failure and reduces the amount of space required on the terminal rail by 50%.

**General ordering data**

Version	Electronic load monitoring, 1 A, 24 V DC
Order No.	<a href="#">2082040000</a>
Type	AMG ELM-1F EX
GTIN (EAN)	4050118419580
Qty.	1 pc(s).

## AMG ELM-1F EX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Dimensions and weights

Depth	96.5 mm	Depth (inches)	3.799 inch
Height	125 mm	Height (inches)	4.921 inch
Width	6.1 mm	Width (inches)	0.24 inch
Net weight	40 g		

## Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...70 °C
---------------------	----------------	-----------------------	----------------

## Input

Current consumption (full load)	I <sub>OUT</sub> +30 mA	Current consumption (idle)	25 mA
DC input voltage range	18...30 V DC	Input fuse (internal)	Yes
Rated input voltage	24 V DC	Surge protection	Suppressor diode
max. admissible residual ripple at the input	100 mVpp		

## Output

Adjustable rated current	No	Capacitive load	10,000 µF
Connection system	PUSH IN	Rated current	1 A
Surge protection	Suppressor diode	Switch-on delay	1 s
Triggering characteristic	see characteristic curve		

## General data

Conformal coating	Yes		
Function key	Activation time <3s, Reset, ON		
MTTF	According to Standard	SN 29500	
	Operating time (hours), min.	3,063,000 h	
	Ambient temperature	40 °C	
	Input voltage	24 V	
	Output power	24 W	
	Duty cycle	100 %	
Power loss, idling	415 mW		
Power loss, nominal load	469 mW		
Protection degree	IP20		
Relay to activate the output	No		
Surge voltage category	III		

## Insulation coordination

Surge voltage category	III
------------------------	-----

## Connection data (output)

Conductor cross-section, AWG/kcmil , max.	12 AWG	Conductor cross-section, AWG/kcmil , min.	26 AWG
Conductor cross-section, flexible , max.	2.5 mm <sup>2</sup>	Conductor cross-section, flexible , min.	0.14 mm <sup>2</sup>
Conductor cross-section, rigid , max.	2.5 mm <sup>2</sup>	Conductor cross-section, rigid , min.	0.14 mm <sup>2</sup>
Connection system	PUSH IN	Number of terminals	2 (+ / -)
Screwdriver blade	0.6 x 3.5		

## AMG ELM-1F EX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Signalling

LED green	Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Operation (failure-free)		

## Approbations

Certificate No. (ATEX)	DEMKO17ATEX1870X	Certificate no. (cULus)	E258476
Certificate no. (cULusEX)	E470829	Institute (cULus)	CULUS
Institute (cULusEX)	CULUSEX	Institute(ATEX)	DEMKOATEX

## Classifications

ETIM 6.0	EC002057	ETIM 7.0	EC002057
ETIM 8.0	EC002057	ETIM 9.0	EC001437
ECLASS 9.0	27-37-10-16	ECLASS 9.1	27-37-10-16
ECLASS 10.0	27-37-10-16	ECLASS 11.0	27-37-10-16
ECLASS 12.0	27-37-10-16	ECLASS 13.0	27-37-10-16

## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	a7fff16c-85aa-4fb0-a206-7be03f41b0b7
RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl

## Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E258476
Certificate no. (cULusEX)	E470829

**AMG ELM-1F EX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Downloads**

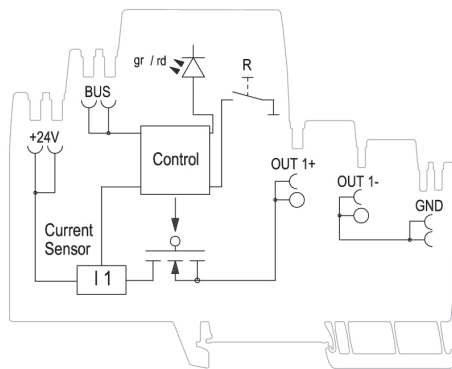
Approval/Certificate/Document of Conformity	<a href="#">MaxGuard AMG ELM EX UL 61010-1 .pdf</a>
	<a href="#">MaxGuard AMG ELM EX UL C1D2 .pdf</a>
	<a href="#">MaxGuard AMG ELM UL 508 CSA C22.2.pdf</a>
	<a href="#">MaxGuard EX ATEX .pdf</a>
	<a href="#">BV Certificate</a>
	<a href="#">DNV Certificate</a>
	<a href="#">ABS Certificate</a>
	<a href="#">RINA Certificate</a>
	<a href="#">Declaration of Conformity</a>
Engineering Data	<a href="#">UK Conformity Assessed</a>
	<a href="#">CAD data – STEP</a>
Product Change Notification	<a href="#">Release Notes</a>
User Documentation	<a href="#">Manual_maxGUARD</a>
	<a href="#">Operating instructions</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>

## AMG ELM-1F EX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany

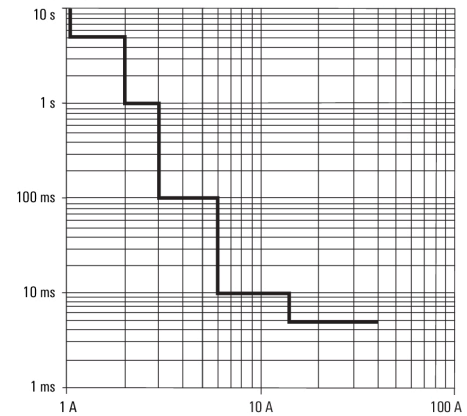
[www.weidmueller.com](http://www.weidmueller.com)

# Drawings



Schematic circuit diagram

Tripping characteristic normal



Tripping characteristic

## AMG ELM-1F EX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)

## Accessories

## Slotted screwdriver



VDE insulated screwdriver sets, for working on live parts up to 1000 V AC and 1500 V DC, DIN EN 60900. IEC 900. Each piece is "GS" safety tested. Blade made from fully hardened, high-alloy chromium-vanadium-molybdenum steel, gun-metal finish.

## General ordering data

Type	SDIS SL 0.6X3.5X100	Version
Order No.	<a href="#">1274660000</a>	Screwdriver, Mounting tool
GTIN (EAN)	4050118072631	
Qty.	1 pc(s).	

## W-Series



Weidmüller's range of products includes end brackets that guarantee a permanent, reliable mounting on the terminal rail and prevent sliding. Versions with and without screws are available. The end brackets include marking options, also for group markers, and also a test plug holder.

## General ordering data

Type	WEW 35/2 V0 GF SW	Version
Order No.	<a href="#">1479000000</a>	End bracket, black, TS 35, V-0, Wemid, Width: 8 mm, 130 °C
GTIN (EAN)	4050118286779	
Qty.	50 pc(s).	

## AMG ELM-1F EX

Weidmüller Interface GmbH &amp; Co. KG

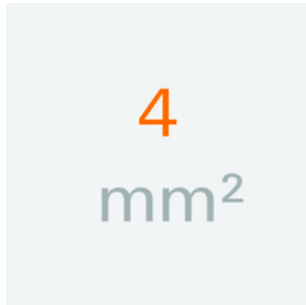
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Accessories

4 mm<sup>2</sup>

The plug-in cross-connections feature easy handling and quick installation. This saves a great deal of time during installation in comparison with screwed solutions.

## General ordering data

Type	ZQV 4N/7	Version
Order No.	<a href="#">1528020000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332780	7, Pitch in mm (P): 6.10, Insulated: Yes, Width: 40.4 mm
Qty.	20 pc(s).	
Type	ZQV 4N/9 RD	Version
Order No.	<a href="#">2460750000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 9,
GTIN (EAN)	4050118476170	Pitch in mm (P): 6.10, Insulated: Yes, Width: 52.6 mm
Qty.	20 pc(s).	
Type	ZQV 4N/2	Version
Order No.	<a href="#">1527930000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332766	2, Pitch in mm (P): 6.10, Insulated: Yes, Width: 9.9 mm
Qty.	60 pc(s).	
Type	ZQV 4N/2 BL	Version
Order No.	<a href="#">1528040000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 2,
GTIN (EAN)	4050118332773	Pitch in mm (P): 6.10, Insulated: Yes, Width: 9.9 mm
Qty.	60 pc(s).	
Type	ZQV 4N/3 RD	Version
Order No.	<a href="#">2460810000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 3,
GTIN (EAN)	4050118476231	Pitch in mm (P): 6.10, Width: 16 mm
Qty.	60 pc(s).	
Type	ZQV 4N/3 BL	Version
Order No.	<a href="#">1528080000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 3,
GTIN (EAN)	4050118333008	Pitch in mm (P): 6.10, Insulated: Yes, Width: 16 mm
Qty.	60 pc(s).	
Type	ZQV 4N/10 BL	Version
Order No.	<a href="#">1528230000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 10,
GTIN (EAN)	4050118333138	Pitch in mm (P): 6.10, Insulated: Yes, Width: 58.7 mm
Qty.	20 pc(s).	
Type	ZQV 4N/10	Version
Order No.	<a href="#">1528090000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332896	10, Pitch in mm (P): 6.10, Insulated: Yes, Width: 58.7 mm
Qty.	20 pc(s).	
Type	ZQV 4N/50 BL	Version
Order No.	<a href="#">1528240000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 50,
GTIN (EAN)	4050118333121	Pitch in mm (P): 6.10, Insulated: Yes, Width: 303.7 mm
Qty.	5 pc(s).	
Type	ZQV 4N/4 BL	Version
Order No.	<a href="#">1528120000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 4,
GTIN (EAN)	4050118332872	Pitch in mm (P): 6.10, Insulated: Yes, Width: 22.1 mm
Qty.	60 pc(s).	

## AMG ELM-1F EX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Accessories

Type	ZQV 4N/5 BL	Version
Order No.	<a href="#">1528140000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 5,
GTIN (EAN)	4050118333015	Pitch in mm (P): 6.10, Insulated: Yes, Width: 28.2 mm
Qty.	60 pc(s).	
Type	ZQV 4N/8 BL	Version
Order No.	<a href="#">1528190000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 8,
GTIN (EAN)	4050118332858	Pitch in mm (P): 6.10, Insulated: Yes, Width: 46.5 mm
Qty.	20 pc(s).	
Type	ZQV 4N/2 RD	Version
Order No.	<a href="#">2460450000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 2,
GTIN (EAN)	4050118476149	Pitch in mm (P): 6.10, Width: 9.9 mm
Qty.	60 pc(s).	
Type	ZQV 4N/5 RD	Version
Order No.	<a href="#">2460790000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 5,
GTIN (EAN)	4050118476217	Pitch in mm (P): 6.10, Insulated: Yes, Width: 28.2 mm
Qty.	60 pc(s).	
Type	ZQV 4N/7 BL	Version
Order No.	<a href="#">1528180000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 7,
GTIN (EAN)	4050118333114	Pitch in mm (P): 6.10, Insulated: Yes, Width: 40.4 mm
Qty.	20 pc(s).	
Type	ZQV 4N/7 RD	Version
Order No.	<a href="#">2460770000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 7,
GTIN (EAN)	4050118476194	Pitch in mm (P): 6.10, Insulated: Yes, Width: 40.4 mm
Qty.	20 pc(s).	
Type	ZQV 4N/5	Version
Order No.	<a href="#">1527980000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332759	5, Pitch in mm (P): 6.10, Insulated: Yes, Width: 28.2 mm
Qty.	60 pc(s).	
Type	ZQV 4N/6 BL	Version
Order No.	<a href="#">1528170000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 6,
GTIN (EAN)	4050118332926	Pitch in mm (P): 6.10, Insulated: Yes, Width: 34.3 mm
Qty.	20 pc(s).	
Type	ZQV 4N/10 RD	Version
Order No.	<a href="#">2460740000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 10,
GTIN (EAN)	4050118476163	Pitch in mm (P): 6.10, Width: 58.7 mm
Qty.	20 pc(s).	
Type	ZQV 4N/50 RD	Version
Order No.	<a href="#">2460730000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 50,
GTIN (EAN)	4050118476156	Pitch in mm (P): 6.10, Insulated: Yes, Width: 303.7 mm
Qty.	5 pc(s).	
Type	ZQV 4N/6	Version
Order No.	<a href="#">1527990000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332919	6, Pitch in mm (P): 6.10, Insulated: Yes, Width: 34.3 mm
Qty.	20 pc(s).	
Type	ZQV 4N/8 RD	Version
Order No.	<a href="#">2460760000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 8,
GTIN (EAN)	4050118476187	Pitch in mm (P): 6.10, Insulated: Yes, Width: 46.5 mm
Qty.	20 pc(s).	
Type	ZQV 4N/4	Version
Order No.	<a href="#">1527970000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332889	4, Pitch in mm (P): 6.10, Insulated: Yes, Width: 22.1 mm
Qty.	60 pc(s).	

Creation date July 25, 2024 8:55:24 PM CEST

Catalogue status 13.07.2024 / We reserve the right to make technical changes.



## AMG ELM-1F EX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Accessories

Type	ZQV 4N/9	Version
Order No.	<a href="#">1528070000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332797	9, Pitch in mm (P): 6.10, Insulated: Yes, Width: 52.6 mm
Qty.	20 pc(s).	
Type	ZQV 4N/3	Version
Order No.	<a href="#">1527940000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332865	3, Pitch in mm (P): 6.10, Insulated: Yes, Width: 16 mm
Qty.	60 pc(s).	
Type	ZQV 4N/8	Version
Order No.	<a href="#">1528030000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332841	8, Pitch in mm (P): 6.10, Insulated: Yes, Width: 46.5 mm
Qty.	20 pc(s).	
Type	ZQV 4N/4 RD	Version
Order No.	<a href="#">2460800000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 4,
GTIN (EAN)	4050118476224	Pitch in mm (P): 6.10, Insulated: Yes, Width: 22.1 mm
Qty.	60 pc(s).	
Type	ZQV 4N/9 BL	Version
Order No.	<a href="#">1528220000</a>	Cross-connector (terminal), Plugged, blue, 32 A, Number of poles: 9,
GTIN (EAN)	4050118333107	Pitch in mm (P): 6.10, Insulated: Yes, Width: 52.6 mm
Qty.	20 pc(s).	
Type	ZQV 4N/50	Version
Order No.	<a href="#">1528130000</a>	Cross-connector (terminal), Plugged, orange, 32 A, Number of poles:
GTIN (EAN)	4050118332902	50, Pitch in mm (P): 6.10, Insulated: Yes, Width: 303.7 mm
Qty.	5 pc(s).	
Type	ZQV 4N/6 RD	Version
Order No.	<a href="#">2460780000</a>	Cross-connector (terminal), Plugged, red, 32 A, Number of poles: 6,
GTIN (EAN)	4050118476200	Pitch in mm (P): 6.10, Insulated: Yes, Width: 34.3 mm
Qty.	20 pc(s).	

## AMG ELM-1F EX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Accessories

## Blank



WS markers are the perfect match for the W-series connectors. Thanks to their system compatibility, the WS tags can also be used with the I-series and the Z-series. The large marking surfaces do not only permit long character strings but also multi-line text. WS markers are ideal for labels with long, customised character strings. Thanks to the proven MultiCard format, printing with PrintJet CONNECT oder/or Plotter is possible.

- Can be fitted in strips or individually
- Markers in proven MultiCard format

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

## General ordering data

Type	WS 10/6 M MC NE WS	Version
Order No.	<a href="#">1818400000</a>	WS, Terminal marker, 10 x 6 mm, Pitch in mm (P): 6.00 Weidmueller,
GTIN (EAN)	4032248310876	Allen-Bradley, white
Qty.	600 pc(s).	

## Extended version for shipbuilding and EX applications



Efficient machine and facility operation calls for fail-safe and maintenance-friendly control voltage distribution that can be installed in a time and space-saving manner. With the new maxGUARD system, the terminal blocks (previously installed separately) for distributing potential to the outputs of the electronic load monitors become an integral part of a 24 V DC control voltage distribution system.

The innovative combination of load monitoring and potential distribution saves time during installation, increases safety against failure and reduces the amount of space required on the terminal rail by 50%.

## General ordering data

Type	AMG OD EX	Version
Order No.	<a href="#">2495090000</a>	Potential distributor
GTIN (EAN)	4050118504781	
Qty.	10 pc(s).	
Type	AMG PD EX	Version
Order No.	<a href="#">2495070000</a>	Potential distributor
GTIN (EAN)	4050118504767	
Qty.	10 pc(s).	
Type	AMG DIS EX	Version
Order No.	<a href="#">2495100000</a>	Potential distributor
GTIN (EAN)	4050118504798	
Qty.	10 pc(s).	

## AMG ELM-1F EX

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)

## Accessories

Type	AMG MD EX	Version
Order No.	<a href="#">2495040000</a>	Potential distributor
GTIN (EAN)	4050118504804	
Qty.	10 pc(s).	

### Standard version for machine construction



Efficient machine and facility operation calls for fail-safe and maintenance-friendly control voltage distribution that can be installed in a time and space-saving manner.

With the new maxGUARD system, the terminal blocks (previously installed separately) for distributing potential to the outputs of the electronic load monitors become an integral part of a 24 V DC control voltage distribution system.

The innovative combination of load monitoring and potential distribution saves time during installation, increases safety against failure and reduces the amount of space required on the terminal rail by 50%.

### General ordering data

Type	AMG PP	Version
Order No.	<a href="#">2123000000</a>	Partition plate
GTIN (EAN)	4050118425338	
Qty.	40 pc(s).	
Type	AMG EP 2010	Version
Order No.	<a href="#">2495380000</a>	Fastening element
GTIN (EAN)	4050118505306	
Qty.	30 pc(s).	