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Focus Product Manual

Louder &
Brighter
since 1910.

Auer Signal

MEDIUM-SIZED, CUSTOMER-ORIENTED, EXPERTS IN OUR FIELD.

Auer Signal is one of the world's leading manufacturers of signalling equipment and is present in over 70 countries today. In over 100 years of Auer Signal company history, the owner-managed family business has been a symbol of long-term partnership, trust and dependability.

Our products are planned, constructed and tested by our development teams. Innumerable test steps ensure the best product quality. Made in Austria: Auer Signal products stand out from the crowd thanks to their innovative in-depth solutions and ingenious engineering.

Seven compelling reasons to choose Auer Signal

1 We develop our own products and production is completed to the highest of industrial standards

2 Every product we create is of exceptional quality

3 We have products for every application — ranging from the premium to the value segment

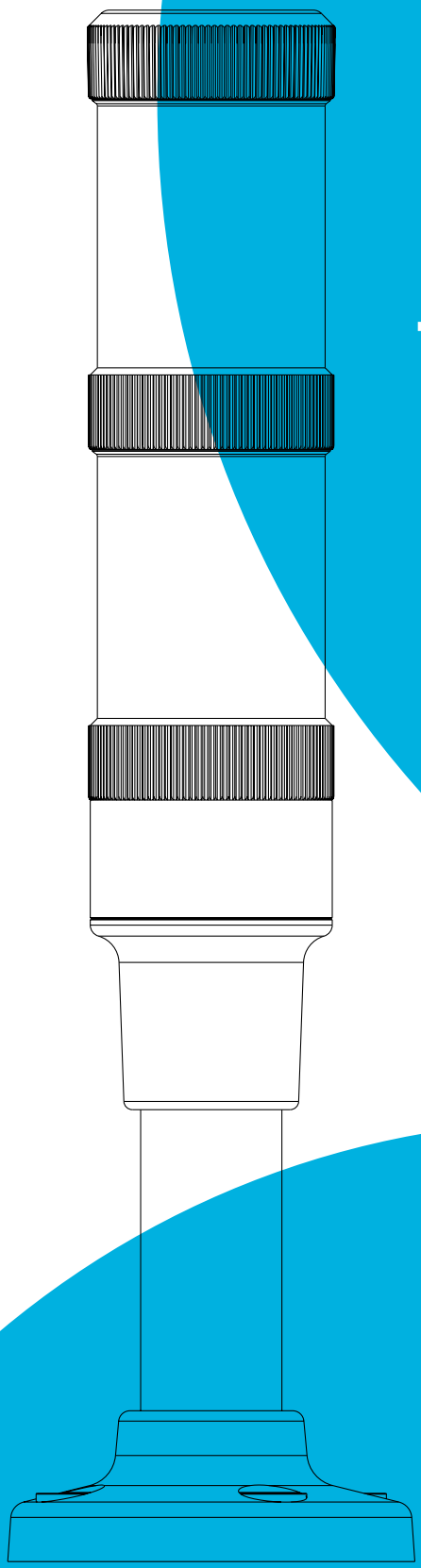
4 We develop and produce tailor-made signalling equipment

5 Our signalling equipment complies with the required industry standards for use around the world

6 We keep our promises

7 We always deliver on time

Signal towers



Modul-Perfect 70 – PC7

Nothing but perfect.

CONTACT LOGIC
- central

ARGUMENT
- leading performance and brightness
- offers all led light/sound features even for special industrial solutions
- leading performance and competitiveness with multi-colour and M12 solutions
- future oriented and advantageous central contacting system

INDUSTRY/APPLICATION
- plant/mechanical/construction engineering
- automation solutions
- electrical wholesale

Modul-Compete 50 – CT5

Competitive Simplicity

CONTACT LOGIC
- central

ARGUMENT
- complete offering of led/incandescent light and sound products
- very competitive price/performance ratio
- excellent performance in dedicated market segment
- future oriented and advantageous central contacting system

INDUSTRY/APPLICATION
- plant/mechanical/construction engineering
- automation solutions
- electrical wholesale

Eco-Modul 70/60/40

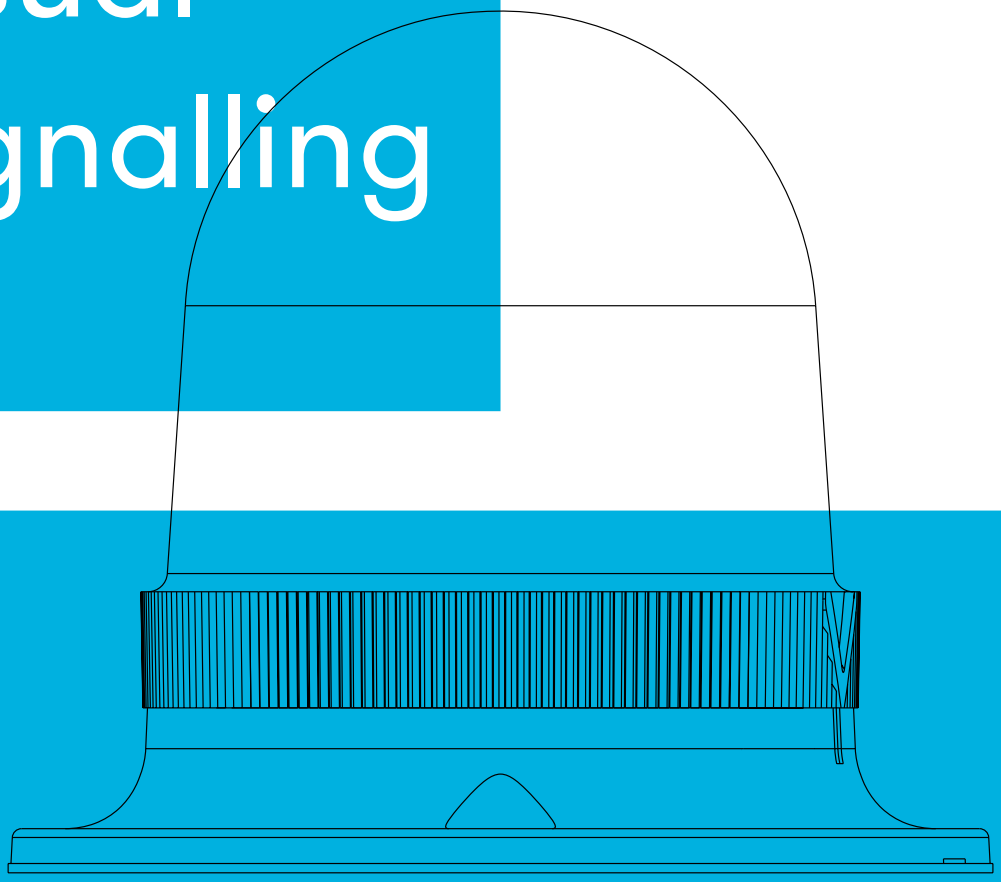
the Flexible Allrounder

CONTACT LOGIC
- classic pins

ARGUMENT
- complete offering of led/incandescent/sound products
- available in 3 tower dimensions
- comprehensive and well proven product family
- classic contacting system

INDUSTRY/APPLICATION
- plant/mechanical/construction engineering
- automation solutions
- electrical wholesale

Visual Signalling



Series R

Market Launch April 2020/HMI fair

The LED-Design-Powerhouse

PRODUCTS

RDC	led steady beacon
RDM	led multi-function beacon
RDMHP	led multi-function beacon High Performance
RMM	led multi-colour beacon
RCDM	compact led multi-function beacon
RCMM	compact led multi-colour beacon

ARGUMENT

- leading performance and product range
- modular system – “1 size fits all”
- visual-audible solutions for all beacon models
- multi-function beacon offers 7 externally switchable operating modes (total 28 modes)
- High Performance model for applications in bright sunlight etc.
- multi-colour beacon offers 7 externally switchable colours
- stand-alone industrial beacon design
- significant reduction of order numbers nevertheless very comprehensive product range

INDUSTRY/APPLICATION

- for industrial and general applications in practically all industries
- for indoor and outdoor applications (IP66)
- electrical wholesale

Series Q

PRODUCTS

QDS / QDM	led steady/flashing beacons
QBS / QBM	led multi-strobe/multi-function beacons

ARGUMENT

- cubic design very popular beacon range in 2 main sizes
- effective front and lateral signalling/ performance
- primarily for wall mount applications
- multi-strobe beacon with 4 strobe modes + steady and flashing patterns
- for indoor and outdoor applications (IP66)
- combinable beacon/beacon and beacon/ sounder assemblies (series A/Q)

INDUSTRY/APPLICATION

- for industrial and general applications in practically all industries
- for indoor and outdoor applications (IP66)
- electrical wholesale
- customized models for crane/special vehicle applications

the Bright

Series N

PRODUCTS

NES	led steady/flashing beacons
NFS-HP	led multi-strobe beacons
NMS-HP	led multi-colour beacons (red-yellow-green)

ARGUMENT

- compact led beacons with high performance leds
- switched mode power supply for wide voltage range
- for indoor and outdoor applications (IP65, IP67)
- sophisticated lens design for optimal signalling effect
- comprehensive mounting options

INDUSTRY/APPLICATION

- for industrial and general applications in practically all industries
- customized models for crane/special vehicle applications

the Performer

Series T+U

PRODUCTS

TDC / UDC	led steady/flashing beacons
TDF / UDF	led multi-strobe beacons
TMW/UMW	base for horizontal mounting
TMV/UMV	base for vertical mounting

ARGUMENT

- Ø 75mm and Ø 60mm medium/ smaller size led beacons
- excellent brightness and signalling effect
- for indoor and outdoor applications (IP66)
- wide range of mounting options

INDUSTRY/APPLICATION

- for industrial and general applications in practically all industries
- electrical wholesale
- door, access and gate applications

the Allrounder

Series P

PRODUCTS

PCH / PCL	led steady/flashing beacons
PFH / PFL	led multi-strobe beacons
PMH	led multi-colour beacons

ARGUMENT

- Ø 75mm led beacons, pre-wired with 1m PUR cable
- high IP66/67 IP rating
- for challenging outdoor applications
- excellent brightness and signalling effect
- pre-mounted stainless steel mounting screws
- horizontal, vertical and pole mounting options

INDUSTRY/APPLICATION

- for industrial and general applications in practically all industries
- for difficult outdoor or special vehicle applications

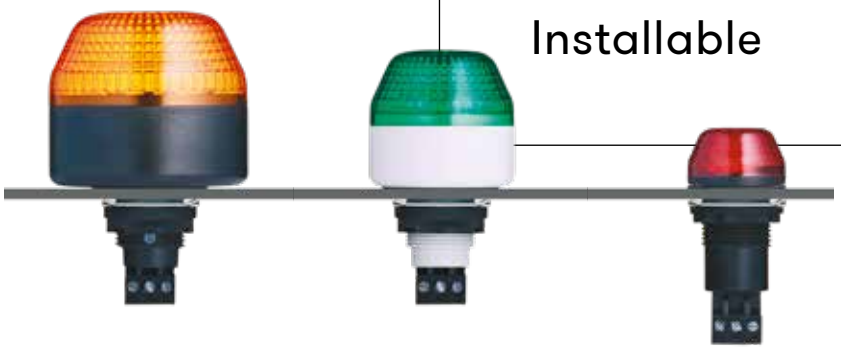
the Tough

Series M22

PRODUCTS

IBS/IBM/IBL	led steady/flashing panel mount beacons
ISS/ICM/ICL	led multi-strobe panel mount beacons

the Brightest Installable



ARGUMENT
- Ø 30/45/65 mm led panel mount beacons
- IP65 in panel mount condition
- light functions externally switchable via terminal
- excellent front/side signalling effect
- dual and triple colour models also available
- excellent price/performance ratio

INDUSTRY/APPLICATION
- for industrial and general applications
- for switch cabinet/panels and enclosures
- for versatile applications in practically all industries

Series T+U

PRODUCTS

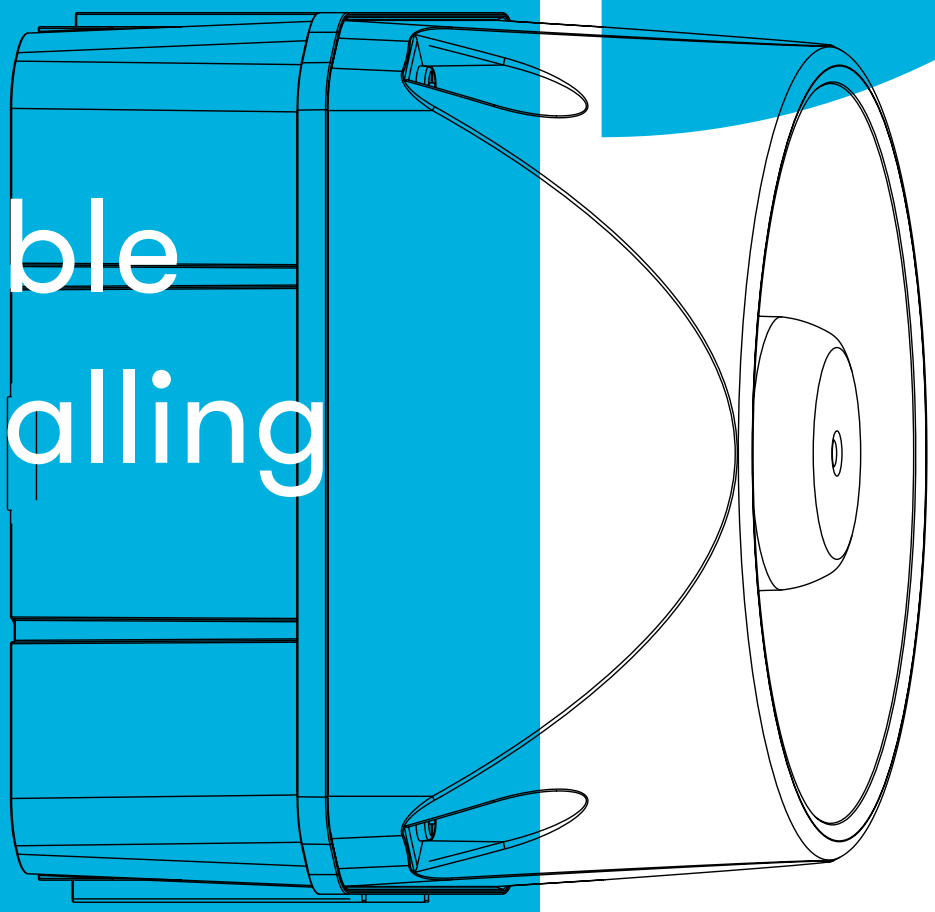
TDCP / UDCP	led steady/flashing panel mount beacons
TDFP / UDFP	led multi-strobe panel mount beacons

the Allrounder

ARGUMENT
- Ø 75/60 mm larger led panel mount beacons
- high IP66 rating in panel mount condition
- light functions externally switchable via terminal
- excellent lateral and front signalling effect
- very good price/performance ratio

INDUSTRY/APPLICATION
- for industrial and general applications
- for switch cabinet/panels and enclosures
- for gate, access control applications

Audible Signalling



Series A

the Mighty

ARGUMENT
- cubic design very popular sounder range in 3 main sizes
- 8, 32 or 63 tones selectable depending on model
- up to 3 tones externally switchable
- primarily for wall mount applications
- for indoor and outdoor applications (IP66)
- combinable sounder/beacon and beacon/sounder assemblies (series A/Q)

PRODUCTS

ASS-P / ASS-T	multi-tone alarm sounders, max. 103/108 dB
ASM	multi-tone alarm sounders, max. 113 dB
ASL	multi-tone alarm sounders, max. 120 dB

INDUSTRY/APPLICATION
- for industrial and general applications in practically all industries
- for indoor and outdoor applications (IP66)
- electrical wholesale
- customized models for crane and other applications

Series T

PRODUCTS

TDE	piezo buzzer with high IP rating

ARGUMENT
- Ø 75mm mid-size piezo buzzer with max. 100 dB sound pressure
- continuous and pulsing tones externally switchable
- very high IP66 rating even for difficult outdoor applications
- wide range of mounting options
- can be combined with any T-series beacon model

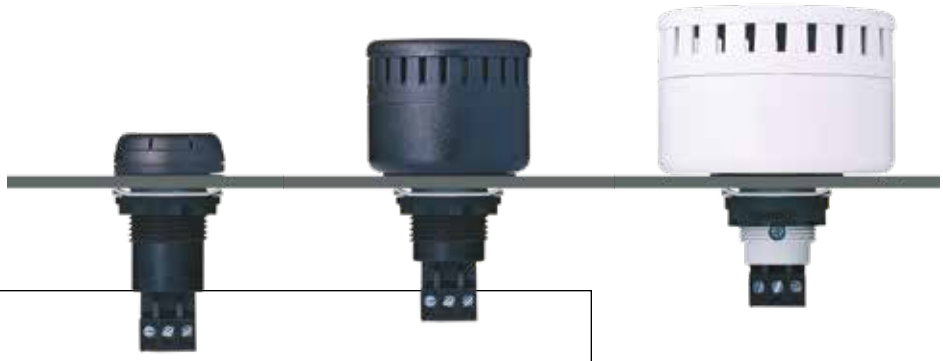
INDUSTRY/APPLICATION
- for industrial and general applications in practically all industries
- electrical wholesale
- door, access and gate applications

the Allrounder

Series M22

PRODUCTS

ESK / ESV	panel mount buzzers Ø 30 mm, max. 65/85 dB (A) in 1m
ESM / ESG	panel mount buzzers Ø 45 and 65 mm, max. 100/105 dB (A) in 1m



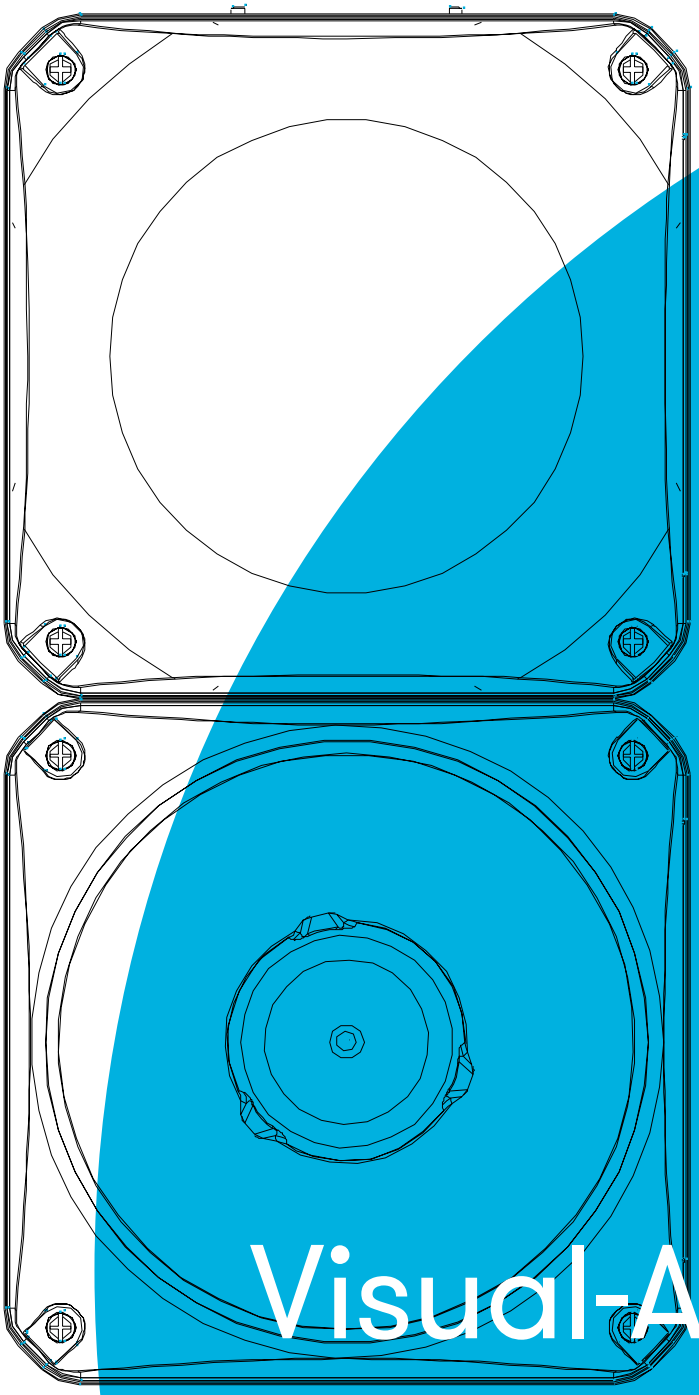
the Loudest Installable

ARGUMENT

- IP65 in panel mount condition
- 2 respectively 3 tone types externally switchable
- sound pressure infinitely adjustable (ESM/ESG), even in panel mount condition
- excellent price/performance ratio

INDUSTRY/APPLICATION

- for switch cabinet/panels and enclosures
- for versatile applications in industrial/general applications



Visual-Audible Signalling

Series A+Q

ARGUMENT

- cubic design very popular sounders with same size led beacons in 3 main sizes
- 8, 32 or 63 tones selectable depending on model
- up to 3 tones externally switchable
- led steady/flashing or led multi-strobe beacons
- effective front and lateral signalling/performance
- primarily for wall mount applications
- for indoor and outdoor applications (IP66)
- sounders with 1 or more beacons combinable
- lower cost options with integrated small beacons/ buzzers available as well: ADS-P/ADS-T, ADM/ ACM, QSS/QCS, QSM/QCM

INDUSTRY/APPLICATION

- for industrial and general applications in practically all industries
- for indoor and outdoor applications (IP66)
- electrical wholesale
- customized models for crane/special vehicle applications

the Mighty & the Bright

PRODUCTS

ASS-P/ASS-T + QDS/QBS	multi-tone alarm sounders + Led beacons
ASM + QDM/QBM	multi-tone alarm sounders + Led beacons
ASL + QDL/QBL	multi-tone alarm sounders + Led beacons

Series R

Market Launch April 2020/HMI fair

PRODUCTS

RDC+RBA	led steady beacon with audible base
RDM/RCDM+RBA	led multi-function beacons with audible base
RMM/RCMM+RBA	led multi-colour beacons with audible base

ARGUMENT

- combination of R- series beacons with multi-tone alarm sounder
- leading performance both visual and audible
- 32 tones selectable, 3 tones externally switchable
- up to 103 dB (A) infinitely adjustable sound pressure
- high IP66 rating for outdoor and indoor applications

INDUSTRY/APPLICATION

- for industrial and general applications in practically all industries
- for indoor and outdoor applications (IP66)
- electrical wholesale

The LED-Design-Powerhouse

Series T

PRODUCTS

TDC+TDE	led steady/flashing beacons + piezo buzzer with high IP66 rating
TDF+TDE	led multi-strobe beacons + piezo buzzer with high IP66 rating
TMW/TMV	bases for horizontal/vertical mounting

ARGUMENT

- Ø 75mm medium size led beacon range with high IP piezo buzzer,
- excellent brightness and signalling effect
- continuous and pulsing tones, max. 100 dB (A) in 1m
- high IP66 rating for indoor and outdoor applications
- wide range of mounting options

INDUSTRY/APPLICATION

- for industrial and general applications in practically all industries
- electrical wholesale
- door, access and gate applications

the Allrounder

Series M22

PRODUCTS

ELM	panel mount buzzers Ø 45 mm with led beacon, max. 98 dB (A) in 1m
ELG	panel mount buzzers Ø 65 mm with led beacon, max. 103 dB (A) in 1m

ARGUMENT

- standard models with synchronized tone and light
- (continuous tone/led steady light – pulsing tone/led flashing light)
- high IP65 rating in panel mount condition
- sound pressure infinitely adjustable even in panel mount condition
- excellent price/performance ratio
- optional models available with separately switchable tone and light

INDUSTRY/APPLICATION

- for switch cabinet/panels and enclosures
- for versatile applications in industrial/general applications too

the loudest & brightest installable

Order Numbers

PC7

order number	type	specification	nominal voltage	product description
910011405	PC7DC	amber	24 V AC/DC	Led steady light module
910012405	PC7DC	red	24 V AC/DC	Led steady light module
910016405	PC7DC	green	24 V AC/DC	Led steady light module
910015405	PC7DC	blue	24 V AC/DC	Led steady light module
910014405	PC7DC	clear	24 V AC/DC	Led steady light module
910017405	PC7DC	yellow	24 V AC/DC	Led steady light module
910021405	PC7DF	amber	24 V AC/DC	Led multifunction module
910022405	PC7DF	red	24 V AC/DC	Led multifunction module
910031405	PC7DR	amber	24 V AC/DC	Led rotating light module
910032405	PC7DR	red	24 V AC/DC	Led rotating light module
910111405	PC7DCB	amber	24 V AC/DC	Top Led steady/flashing light module
910112405	PC7DCB	red	24 V AC/DC	Top Led steady/flashing light module
910121405	PC7DFB	amber	24 V AC/DC	Top Led multifunction light module
910122405	PC7DFB	red	24 V AC/DC	Top Led multifunction light module
910131405	PC7DRB	amber	24 V AC/DC	Top Led rotating light module
910132405	PC7DRB	red	24 V AC/DC	Top Led rotating light module
910510405	PC7ZM		24 V AC/DC	Top multitone module
910520405	PC7ZI		24 V AC/DC	Inline multitone module
910530405	PC7TD		24 V AC/DC	Top multitone siren module
910771405	PC7BLV		24 V	Base upper part low voltage, up to 7 modules
910772313	PC7BHV3		110-240 V AC	Base upper part high voltage, up to 3 modules
910773313	PC7BHV7		110-240 V AC	Base upper part high voltage, up to 7 modules
910710900	PC7MW			Base for horizontal mounting, with NPT 1/2" thread
910720900	PC7MS			Base for horizontal mounting, with pre-mounted screws, with NPT 1/2" thread
910730900	PC7MV			Base for vertical mounting
910742900	PC7MR	100 mm		Pole base on aluminium tube with plastic foot
910752900	PC7RS	100 mm		Pole base on aluminium tube with screw
910760900	PC7MP			Universal base for mounting on 25mm Ø tubes
910781405	PC7MC5		24 V AC/DC	Base with integrated 5-Pin M12-connector
910782405	PC7MC8		24 V AC/DC	Base with integrated 8-Pin M12-connector
910775200	PC7ASI20		27-31 V DC	AS-Interface module, 31 slaves
910775300	PC7ASI30		27-31 V DC	AS-Interface module, 62 slaves
910000900	PC7LD			Diffusor film set

PC7 – PRE-ASSEMBLED SIGNAL TOWERS

order number	specification	nominal voltage	product description
PC7-Q01	red-amber-green	24 V AC/DC	Led steady light module on 100 mm aluminium pole with plastic foot
PC7-Q02	red-green	24 V AC/DC	Led steady light module on 100 mm aluminium pole with plastic foot
PC7-Q05	red-amber-green-blue	24 V AC/DC	Led steady light module on 100 mm aluminium pole with plastic foot
PC7-Q06	red-amber-green	24 V AC/DC	Led multifunction module (red) and Led steady light module on 100 mm aluminium tube with plastic foot
PC7-Q07	red-amber-green	24 V AC/DC	Top Led steady/flashing light module (red) and Led steady light module on 100 mm aluminium tube with plastic foot

CT5

order number	type	specification	nominal voltage	product description
915011005	CT5DC	amber	24 V DC	Led steady light module
915012005	CT5DC	red	24 V DC	Led steady light module
915016005	CT5DC	green	24 V DC	Led steady light module
915015005	CT5DC	blue	24 V DC	Led steady light module
915014005	CT5DC	clear	24 V DC	Led steady light module
915017005	CT5DC	yellow	24 V DC	Led steady light module
915022005	CT5DF	red	24 V DC	Led multifunction module
915021005	CT5DF	amber	24 V DC	Led multifunction module
915510005	CT5ZM		24 V DC	Piezo buzzer module
915710900	CT5MW		24 V DC	Base for horizontal and universal mounting
915781005	CT5MC5		24 V DC	Base with integrated 5-pin M12-connector
915730900	CT5MV		24 V DC	Base for vertical mounting
915715900	CT5NPT		24 V DC	Base for NPT 1/2" conduit mounting
915742910	CT5KR1		24 V DC	Pole base on 100 mm plastic tube with integrated foot
915743900	CT5MR2		24 V DC	Pole base on 250 mm alu-tube with plastic foot
915710910	CT5SK			screw set for alien pole mounting
915735900	CT5BR			metal bracket for cable entry with external cable gland
812100900	WM22			metal bracket for products with M22 mounting thread (for CT5MC5)

CT5 – PRE-ASSEMBLED SIGNAL TOWERS

order number	specification	nominal voltage	product description
CT5-Q01	red-amber-green	24 V DC	Led steady light module on 100 mm plastic tube with integrated foot
CT5-Q02	red-amber-green-blue	24 V DC	Led steady light module on 100 mm plastic tube with integrated foot
CT5-Q05	red-green	24 V DC	Led steady light module on 100 mm plastic tube with integrated foot
CT5-Q31	red-amber-green	24 V DC	Led steady light module with piezo buzzer module on 100 mm plastic tube with integrated foot

Eco-Modul

PRE-ASSEMBLED SIGNAL TOWERS

order number	specification	nominal voltage	product description
ECO70-Q01	red-amber-green	24 V AC/DC	Led steady light module on 100 mm aluminium tube with plastic foot
ECO70-Q05	red-amber-green-blue	24 V AC/DC	Led steady light module on 100 mm aluminium tube with plastic foot
ECO70-Q31	red-amber-green	24 V AC/DC	Led steady light module with piezo buzzer continuous/pulsing tone on 100 mm aluminium tube with plastic foot
ECO60-Q01	red-amber-green	24 V AC/DC	Led steady light module on 100 mm aluminium tube with plastic foot
ECO60-Q05	red-amber-green-blue	24 V AC/DC	Led steady light module on 100 mm aluminium tube with plastic foot
ECO60-Q31	red-amber-green	24 V AC/DC	Led steady light module with piezo buzzer continuous/pulsing tone on 100 mm aluminium tube with plastic foot
ECO40-Q01	red-amber-green	24 V AC/DC	Led steady light module on 100 mm aluminium tube with plastic foot
ECO40-Q05	red-amber-green-blue	24 V AC/DC	Led steady light module on 100 mm aluminium tube with plastic foot
ECO40-Q31	red-amber-green	24 V AC/DC	Led steady light module with piezo buzzer continuous/pulsing tone on 100 mm aluminium tube with plastic foot

Series R

Type	12 V DC	24 V AC/DC	48 V AC/DC	24-48 V AC/DC	110-240 V AC	specification	product description
RDC	850501004	850501405	850501408		850501313	amber	Led Steady Beacon
	850502004	850502405	850502408		850502313	red	
	850504004	850504405	850504408		850504313	clear	
	850505004	850505405	850505408		850505313	blue	
	850506004	850506405	850506408		850506313	green	
	850507004	850507405	850507408		850507313	yellow	
RDM	850511004	850511405	850511408		850511313	amber	Led Multifunction Beacon
	850512004	850512405	850512408		850512313	red	
	850514004	850514405	850514408		850514313	clear	
	850515004	850515405	850515408		850515313	blue	
	850516004	850516405	850516408		850516313	green	
	850517004	850517405	850517408		850517313	yellow	
RDMHP	850521004	850521405	850521408		850521313	amber	Led Multifunction Beacon High Performance
	850522004	850522405	850522408		850522313	red	
	850524004	850524405	850524408		850524313	clear	
	850525004	850525405	850525408		850525313	blue	
	850526004	850526405	850526408		850526313	green	
	850527004	850527405	850527408		850527313	yellow	
RMM	850530004			850530408	850530313		Led Multicolour Beacon
RCDM	850561004			850561408	850561313	amber	Compact Led Multifunction Beacon
	850562004			850562408	850562313	red	
	850564004			850564408	850564313	clear	
	850565004			850565408	850565313	blue	
	850566004			850566408	850566313	green	
	850567004			850567408	850567313	yellow	
RCMM	850570004			850570408	850570313		Compact Led Multicolour Beacon

BASES

Type		24-48 V AC/DC	110-240 V AC	product description
RBA		850535408	850535313	Audible base for R series beacons
RBL	850500900			Standard base for horizontal mounting of R series beacons
RBH	850510900			Universal base for horizontal and pole mounting of R series beacons
RBNPT	850515900			Universal base for NPT 1/2" conduit mounting of R series beacons

BRACKETS

Type	order number	product description
RWD	850520900	Design bracket for vertical mounting of R series beacons with standard base
RWU	850521900	Metal bracket for vertical mounting of standard and universal bases of R series beacons
RWA	850531900	Metal bracket for vertical mounting of R series audible bases

ACCESSORIES

Type	order number	product description
RG1	850590900	Flat gasket for R-series bases to seal on smooth enclosures
RG2	850590910	Flat gasket for vertical mounting of RWD design bracket
AKV	698800026	Cable gland M20 for N/M/R-series, CT5, multitone sirens A and/or beacons Q
RKV	850590920	Cable gland M16 for R series bases

Series Q

order number	type	specification	nominal voltage	product description
874161313	QDS	amber	230-240 V AC	Led steady/flashing beacon
874161405	QDS	amber	24 V AC/DC	Led steady/flashing beacon
874162313	QDS	red	230-240 V AC	Led steady/flashing beacon
874162405	QDS	red	24 V AC/DC	Led steady/flashing beacon
874261408	QDM	amber	24-48 V AC/DC	Led steady/flashing beacon
874261413	QDM	amber	110-240 V AC/DC	Led steady/flashing beacon
874262408	QDM	red	24-48 V AC/DC	Led steady/flashing beacon
874262413	QDM	red	110-240 V AC/DC	Led steady/flashing beacon
874171313	QBS	amber	110-240 V AC/DC	LED multistrobe beacon
874171408	QBS	amber	24-48 V AC/DC	LED multistrobe beacon
874172313	QBS	red	110-240 V AC/DC	LED multistrobe beacon
874172408	QBS	red	24-48 V AC/DC	LED multistrobe beacon
874271313	QBM	amber	110-240 V AC/DC	LED multistrobe beacon
874271408	QBM	amber	24-48 V AC/DC	LED multistrobe beacon
874272313	QBM	red	110-240 V AC/DC	LED multistrobe beacon
874272408	QBM	red	24-48 V AC/DC	LED multistrobe beacon
698800026	AKV			cable gland M20×1,5
874010900	AMK			mounting set for combination of A+Q devices
874031900	AB1			metal bracket set
874032900	AB2			metal bracket set
874021900	AG1			flat gasket for IP66 installations on smooth surfaces
874022900	AG2			flat gasket for IP66 installations on smooth surfaces

Series N

order number	type	specification	nominal voltage	product description
440101408	NES	amber	24-48 V AC/DC	Led steady/flashing beacon with base for horizontal mounting
440101413	NES	amber	110-240 V AC/DC	Led steady/flashing beacon with base for horizontal mounting
440102408	NES	red	24-48 V AC/DC	Led steady/flashing beacon with base for horizontal mounting
440102413	NES	red	110-240 V AC/DC	Led steady/flashing beacon with base for horizontal mounting
442152408	NFS-HP	red	24-48 V AC/DC	Led multistrobe beacon with base for horizontal mounting
442152413	NFS-HP	red	110-240 V AC/DC	Led multistrobe beacon with base for horizontal mounting
441150408	NMS-HP	clear	24-48 V AC/DC	Led multicolour beacon with base for horizontal mounting
441150413	NMS-HP	clear	110-240 V AC/DC	Led multicolour beacon with base for horizontal mounting
698806008	MMR	100 mm		aluminium tobe with plastic foot
817200900	WMS			metal bracket for wall mounting
698800026	AKV			cable gland M20×1,5

Serie T+U

order number	type	specification	nominal voltage	product description
859501313	TDC	amber	230-240 V AC	Led steady/flashing beacon
859501405	TDC	amber	24 V AC/DC	Led steady/flashing beacon
859502313	TDC	red	230-240 V AC	Led steady/flashing beacon
859502405	TDC	red	24 V AC/DC	Led steady/flashing beacon
859511313	TDF	amber	230-240 V AC	Led multistrobe beacon
859511405	TDF	amber	24 V AC/DC	Led multistrobe beacon
859512313	TDF	red	230-240 V AC	Led multistrobe beacon
859512405	TDF	red	24 V AC/DC	Led multistrobe beacon
858501313	UDC	amber	230-240 V AC	Led steady/flashing beacon
858501405	UDC	amber	24 V AC/DC	Led steady/flashing beacon
858502313	UDC	red	230-240 V AC	Led steady/flashing beacon
858502405	UDC	red	24 V AC/DC	Led steady/flashing beacon
858511313	UDF	amber	230-240 V AC	Led multistrobe beacon
858511405	UDF	amber	24 V AC/DC	Led multistrobe beacon
858512313	UDF	red	230-240 V AC	Led multistrobe beacon
858512405	UDF	red	24 V AC/DC	Led multistrobe beacon
859500900	TMW			base for horizontal mounting
859520900	TMV			base for vertical mounting
859532900	TMR	100 mm		pole base
858500900	UMW			base for horizontal mounting
858520900	UMV			base for vertical mounting
858532900	UMR	100 mm		pole base

Serie P

order number	type	specification	nominal voltage	product description
860501313	PCH	amber	230-240 V AC	Led steady/flashing beacon
8605O1405	PCH	amber	24 V AC/DC	Led steady/flashing beacon
860502313	PCH	red	230-240 V AC	Led steady/flashing beacon
860502405	PCH	red	24 V AC/DC	Led steady/flashing beacon
861501313	PCL	amber	230-240 V AC	Led steady/flashing beacon
861501405	PCL	amber	24 V AC/DC	Led steady/flashing beacon
861502313	PCL	red	230-240 V AC	Led steady/flashing beacon
861502405	PCL	red	24 V AC/DC	Led steady/flashing beacon
860511313	PFH	amber	230-240 V AC	Led multistrobe beacon
860511405	PFH	amber	24 V AC/DC	Led multistrobe beacon
860512313	PFH	red	230-240 V AC	Led multistrobe beacon
860512405	PFH	red	24 V AC/DC	Led multistrobe beacon
861511313	PFL	amber	230-240 V AC	Led multistrobe beacon
861511405	PFL	amber	24 V AC/DC	Led multistrobe beacon
861512313	PFL	red	230-240 V AC	Led multistrobe beacon
861512405	PFL	red	24 V AC/DC	Led multistrobe beacon
860550313	PMH	clear	230-240 V AC	Led multicolour beacon
860550405	PMH	clear	24 V AC/DC	Led multicolour beacon
860702900	PMR	100 mm		aluminium tube base with plastic foot
860600900	PVW			bracket for vertical mounting

Serie M22

order number	type	specification	nominal voltage	product description
802501313	IBL	amber	230-240 V AC	M22 panel mount led steady/flashing beacon
8025014O5	IBL	amber	24 V AC/DC	M22 panel mount led steady/flashing beacon
802502313	IBL	red	230-240 V AC	M22 panel mount led steady/flashing beacon
8025024O5	IBL	red	24 V AC/DC	M22 panel mount led steady/flashing beacon
801501313	IBM	amber	230-240 V AC	M22 panel mount led steady/flashing beacon
8015014O5	IBM	amber	24 V AC/DC	M22 panel mount led steady/flashing beacon
801502313	IBM	red	230-240 V AC	M22 panel mount led steady/flashing beacon
8015024O5	IBM	red	24 V AC/DC	M22 panel mount led steady/flashing beacon
800501313	IBS	amber	230-240 V AC	M22 panel mount led steady/flashing beacon
8005014O5	IBS	amber	24 V AC/DC	M22 panel mount led steady/flashing beacon
800502313	IBS	red	230-240 V AC	M22 panel mount led steady/flashing beacon
8005024O5	IBS	red	24 V AC/DC	M22 panel mount led steady/flashing beacon
802521313	ICL	amber	230-240 V AC	M22 panel mount Led multistrobe beacon
802521405	ICL	amber	24 V AC/DC	M22 panel mount Led multistrobe beacon
802522313	ICL	red	230-240 V AC	M22 panel mount Led multistrobe beacon
802522405	ICL	red	24 V AC/DC	M22 panel mount Led multistrobe beacon
801521313	ICM	amber	230-240 V AC	M22 panel mount Led multistrobe beacon
801521405	ICM	amber	24 V AC/DC	M22 panel mount Led multistrobe beacon
801522313	ICM	red	230-240 V AC	M22 panel mount Led multistrobe beacon
801522405	ICM	red	24 V AC/DC	M22 panel mount Led multistrobe beacon
800511313	ISS	amber	230-240 V AC/DC	M22 panel mount led strobe beacon
800511405	ISS	amber	24 V AC/DC	M22 panel mount led strobe beacon
800512313	ISS	red	230-240 V AC/DC	M22 panel mount led strobe beacon
800512405	ISS	red	24 V AC/DC	M22 panel mount led strobe beacon

Serie T+U

order number	type	specification	nominal voltage	product description
859571313	TDCP	amber	230-240 V AC	37mm panel mount Led steady/flashing beacon
859571405	TDCP	amber	24 V AC/DC	37mm panel mount Led steady/flashing beacon
859572313	TDCP	red	230-240 V AC	37mm panel mount Led steady/flashing beacon
859572405	TDCP	red	24 V AC/DC	37mm panel mount Led steady/flashing beacon
859581313	TDFP	amber	230-240 V AC	37 mm panel mount Led multistrobe beacon
859581405	TDFP	amber	24 V AC/DC	38 mm panel mount Led multistrobe beacon
859582313	TDFP	red	230-240 V AC	39 mm panel mount Led multistrobe beacon
859582405	TDFP	red	24 V AC/DC	40 mm panel mount Led multistrobe beacon
858571313	UDCP	amber	230-240 V AC	37mm panel mount Led steady/flashing beacon
858571405	UDCP	amber	24 V AC/DC	37mm panel mount Led steady/flashing beacon
858572313	UDCP	red	230-240 V AC	37mm panel mount Led steady/flashing beacon
858572405	UDCP	red	24 V AC/DC	37mm panel mount Led steady/flashing beacon
858581313	UDFP	amber	230-240 V AC	37 mm panel mount Led multistrobe beacon
858581405	UDFP	amber	24 V AC/DC	38 mm panel mount Led multistrobe beacon
858582313	UDFP	red	230-240 V AC	39 mm panel mount Led multistrobe beacon
858582405	UDFP	red	24 V AC/DC	40 mm panel mount Led multistrobe beacon

Serie A

order number	type	nominal voltage	product description
874060313	ASS-P	230-240 V AC	multitone siren
874060405	ASS-P	24 V AC/DC	multitone siren
874170313	ASS-T	110-240 V AC	multitone siren
874170408	ASS-T	24-48 V AC/DC	multitone siren
874270313	ASM	110-240 V AC	multitone siren
874270408	ASM	24-48 V AC/DC	multitone siren
874360313	ASL	230-240 V AC	multitone siren
874360408	ASL	24-48 V AC/DC	multitone siren
698800026	AKV		cable gland M20×1,5
874010900	AMK		mounting set for combination of A+Q devices
874031900	AB1		bracket mounting kit
874032900	AB2		bracket mounting kit
874033900	AB3		bracket mounting kit
874021900	AG1		flat gasket for installations of flat surfaces
874022900	AG2		flat gasket for installations of flat surfaces
874023900	AG3		flat gasket for installations of flat surfaces

Serie T

order number	type	specification	nominal voltage	product description
859560313	TDE		230-240 V AC	piezo buzzer
859560405	TDE		24 V AC/DC	piezo buzzer
859500900	TMW			base for horizontal mounting
859520900	TMV			base for vertical mounting
859532900	TMR	100 mm		pole base

Serie M22

order number	type	nominal voltage	product description
812500313	ESK	230-240 V AC	M22 panel mount buzzer
812500405	ESK	12-24 V AC/DC	M22 panel mount buzzer
812510313	ESV	230-240 V AC	M22 panel mount buzzer
812510405	ESV	12-24 V AC/DC	M22 panel mount buzzer
813500313	ESM	230-240 V AC	M22 panel mount buzzer
813500405	ESM	12-24 V AC/DC	M22 panel mount buzzer
814500313	ESG	230 V AC	M22 panel mount buzzer
814500405	ESG	12-24 V AC/DC	M22 panel mount buzzer

Serie A+Q

order number	type	product description
874010900	AMK	mounting kit for combination of A/Q devices

Serie R

Type	24-48 V AC/DC	110-240 V AC	product description
RBA	850535408	850535313	Audible base for R series beacons
RWA	850531900		metal bracket for vertical mounting of acoustic bases

Serie T

order number	type	specification	nominal voltage	product description
859560313	TDE		230-240 V AC	piezo buzzer
859560405	TDE		24 V AC/DC	piezo buzzer
859501313	TDC	amber	230-240 V AC	Led steady/flashing beacon
859501405	TDC	amber	24 V AC/DC	Led steady/flashing beacon
859502313	TDC	red	230-240 V AC	Led steady/flashing beacon
859502405	TDC	red	24 V AC/DC	Led steady/flashing beacon
859511313	TDF	amber	230-240 V AC	LED multistrobe beacon
859511405	TDF	amber	24 V AC/DC	LED multistrobe beacon
859512313	TDF	red	230-240 V AC	LED multistrobe beacon
859512405	TDF	red	24 V AC/DC	LED multistrobe beacon
859500900	TMW			base for horizontal mounting
859520900	TMV			base for vertical mounting
859532900	TMR	100 mm		pole base

Serie M22

order number	type	specification	nominal voltage	product description
813511313	ELM	amber	230-240 V AC	M22 panel mount buzzer with Led steady/flashing beacon
813511405	ELM	amber	24 V AC/DC	M22 panel mount buzzer with Led steady/flashing beacon
813512313	ELM	red	230-240 V AC	M22 panel mount buzzer with Led steady/flashing beacon
813512405	ELM	red	24 V AC/DC	M22 panel mount buzzer with Led steady/flashing beacon
814511313	ELG	amber	230-240 V AC	M22 panel mount buzzer with Led steady/flashing beacon
814511405	ELG	amber	24 V AC/DC	M22 panel mount buzzer with Led steady/flashing beacon
814512313	ELG	red	230-240 V AC	M22 panel mount buzzer with Led steady/flashing beacon
814512405	ELG	red	24 V AC/DC	M22 panel mount buzzer with Led steady/flashing beacon

General technical information

Degrees of protection

The degrees of protection set out by standard EN 60529 provide information about the level to which electrical equipment – in our case signalling devices – is protected against the effects of solid foreign objects and against the ingress of liquid by the casing or covers.

The degrees of protection are indicated by a code which always consists of the two letters 'IP' plus two numbers that represent the level of protection. The most common degrees of protection given to Auer Signal products are IP 65, IP 66 and IP 67.

The table below provides an overview of what the IP degree of protection numbers mean and how they are put together:

First number

Protection against foreign objects

0 NO PROTECTION
No special protection stopping people directly touching active or moving parts; no protection for the equipment against the ingress of solid foreign objects

1 PROTECTION AGAINST LARGE FOREIGN OBJECTS
Protection against the ingress of solid foreign objects with a diameter of more than 50 mm, e.g. hands

2 PROTECTION AGAINST MEDIUM-SIZED FOREIGN OBJECTS
Protection against the ingress of solid foreign objects with a diameter of more than 12 mm, e.g. fingers

3 PROTECTION AGAINST SMALL FOREIGN OBJECTS
Protection against the ingress of solid foreign objects with a diameter of 2.5 mm, e.g. tools, wires

4 PROTECTION AGAINST GRANULAR FOREIGN OBJECTS
Protection against the ingress of solid foreign objects with a diameter of more than 1 mm, e.g. fine tools, small wires

Second number

Protection against liquid

0 NO SPECIAL PROTECTION

1 PROTECTION AGAINST DRIPPING WATER - FALLING VERTICALLY
Dripping water falling vertically should not have a harmful effect

2 PROTECTION AGAINST DRIPPING WATER - FALLING AT AN ANGLE
Dripping water falling at any angle up to 15 degrees to the vertical should not have a harmful effect.

3 PROTECTION AGAINST SPRAYING WATER
Dripping water falling at any angle up to 60 degrees to the vertical should not have a harmful effect

4 PROTECTION AGAINST SPLASHING WATER
Water splashing against the equipment from all directions should not have a harmful effect

5 PROTECTION AGAINST DUST DEPOSITS

Fully protected against dust deposits:
The ingress of dust is not completely ruled out, but does not impair the functionality of the device

6 PROTECTION AGAINST INGRESS OF DUST

Fully protected against the ingress of dust

5 PROTECTION AGAINST WATER JETS

A jet of water from any direction should not have a harmful effect

6 PROTECTION AGAINST FLOODING

A harmful amount of water should not enter the equipment in the event of temporary flooding

7 PROTECTION IN THE EVENT OF IMMERSION

A harmful amount of water should not enter the equipment when it is immersed in water under the specified pressure and time conditions

8 PROTECTION IN THE EVENT OF DEEP IMMERSION

A harmful amount of water should not enter the equipment when it is immersed under water

Standards and certification marks

UL CERTIFICATION

Given that Auer Signal has a global market presence, the majority of the company's signalling equipment is also certified in line with UL standards.
Plus, as a member of the 'Client Test Data Program', Auer Signal is also authorised to conduct UL-related tests in its own laboratory. UL accepts the results of such tests on a provisional basis, but then periodically repeats the tests to check the quality of the results.

UL is the locally established certification for devices specifically on the US market. Although UL certification is not a fixed requirement in particular outside of America, a user of a device with UL certification can be sure that it meets incredibly stringent safety standards because UL has a stronger focus on safety-related aspects than European standards.

As part of UL certification, devices have to be tested by qualified testers and inspectors are sent out to device manufacturers four times a year under the scope of follow-up services to ensure that the prescribed manufacturing methods and material specifications are being upheld.

If the UL mark is preceded by the letter C, it indicates that the device has also been tested in line with the standards set out by the CSA (Canadian Standards Association) and has also been certified for use in Canada."

The list below provides an explanation of the device classifications according to UL:

Type 1

Indoor use primarily to provide protection against contact with the enclosed equipment and against a limited amount of falling dust/dirt

Type 2

Indoor use to provide a degree of protection against a limited amount of water and dust

Type 3

Outdoor use to provide a degree of protection against windblown dust and rain; the device is undamaged by the formation of ice on the enclosure

Type 3R

Outdoor use to provide a degree of protection against rain; the device is undamaged by the formation of ice on the enclosure

Type 4

Either indoor or outdoor use to provide a degree of protection against rain, splashing water and hose-directed water; the device is undamaged by the formation of ice on the enclosure

Type 4X

Either indoor or outdoor use to provide a degree of protection against rain, splashing water and hose-directed water; the device is undamaged by the formation of ice on the enclosure; resists corrosion

Type 6

Indoor or outdoor use to provide a degree of protection against entry of water during temporary submersion/flooding at a limited depth; the device is undamaged by the external formation of ice on the enclosure

Type 12

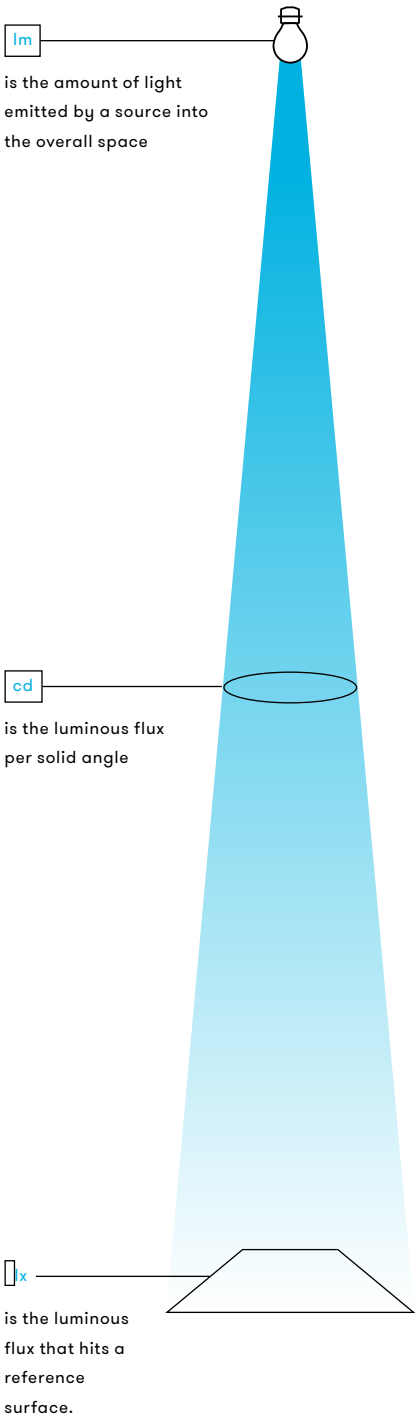
Indoor use to provide a degree of protection against dust, dirt, fibre flyings, dripping water and external condensation of non-corrosive liquids

Type 13

Indoor use to provide a degree of protection against lint, dust seepage, external condensation and spraying of water, oil and non-corrosive liquids

Luminous intensity

In the field of signalling technology, there are different basic quantities that are used to evaluate light. The main standard units of measurement are lumen, candela and lux.



LUMEN [LM] – LUMINOUS FLUX

Luminous flux is a measure of the total visible light emitted by a light source. It expresses how much light is emitted by a light source in all directions. This value is weighted according to human spectral perception. Luminous flux is an excellent way of expressing how effective a light source is.

CANDELA [CD] – LUMINOUS INTENSITY

Luminous intensity expresses the light emitted in a certain direction. As the emission characteristics of visual signalling equipment are determined by the design of the lenses as well as by the light source, luminous intensity is ideally used to characterise the signalling effect of visual signalling equipment.

$$\text{luminous intensity [cd]} = \frac{\text{luminous flux [lm]}}{\text{Solid angle [sr]}}$$

Luminous intensity expresses the light emitted in a certain direction. As the emission characteristics of visual signalling equipment are determined by the design of the lenses as well as by the light source, luminous intensity is ideally used to characterise the signalling effect of visual signalling equipment.

LUX [LX] – ILLUMINANCE

Illuminance is a measure of the brightness with which a surface is illuminated. Illuminance expresses the amount of luminous flux from a light source that is incident on a receiving area per area unit.

$$\text{Lux [lx]} = \frac{\text{luminous flux [lm]}}{\text{Area [m}^2\text{]}}$$

Audible signalling equipments differs in its 1. volume, 2. tone & frequency.

In industry, international safety standards regulate the appropriate installation of audible signalling equipment. These standards set out the requirements and areas of application of audible signalling equipment.

As a manufacturer of audible signalling equipment for the international market, Auer Signal has many years of experience gained from working on numerous projects in a range of different countries. If you have any questions, please don't hesitate to contact us – we will be happy to help you.

AN OVERVIEW OF SOME KEY REGULATIONS

The sound pressure level of an audible signalling device must be at least 15dB higher than the ambient sound level.
The frequency at which the signal is loudest must differ as much as possible from the frequency of the ambient sound.
The tone frequency of the audible signalling device must be between 300 and 3000Hz.

HOW EFFECTIVE AN AUDIBLE SIGNALLING DEVICE IS WILL DEPEND ON

- The sound pressure level in decibels (dB)
- The tone frequency in hertz (Hz)
- The distance between the signalling device and the receiver
- The influence of other sources of interference and ambient noise

The quantifiable factors, such as the sound pressure in decibels (dB) and tone frequency in hertz (Hz), are disclosed for all audible signalling equipment from Auer Signal. The sound pressure level specified for Auer Signal audible devices will have been measured in an anechoic chamber at a distance of 1m.

Pulsing and alternating tones are more effective than continuous tones.

1. Volume

The volume of an audible sound or signal is relative. Although an increase in the sound pressure of 3dB means that the sound energy has doubled, the human ear only senses that the volume has doubled when there has been an increase of 10dB. Our sense of hearing can therefore be said to work on a logarithmic scale.

As well as the absolute volume of a signal, the perceived volume is also determined by the distance between the sounder and the person. When this distance is doubled, this equates to a 6 dB decrease in the sound pressure. The signal is then perceived to be about 25% quieter. The following range table can be used as a basis for estimating the sound level. These values only serve as a guideline, however, as environmental factors such as wind speed, wind direction, humidity and weather conditions do also have an effect on audible signals.

WHEN THE DISTANCE IS DOUBLED,
THE SOUND PRESSURE DROPS BY 6 DB

Distance(m)	Sound pressure level dB (A)																				
1	65	70	75	80	85	90	92	94	96	98	100	102	104	106	108	110	112	114	116	118	120
2	59	64	69	74	79	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114
3	55	60	65	70	75	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
5	51	56	61	66	71	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106
10	45	50	55	60	65	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100
20	39	44	49	54	59	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94
30	35	40	45	50	55	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90
50		36	41	46	51	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86
100				40	45	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80
200					39	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74
500							38	40	42	44	46	48	50	52	54	56	58	60	62	64	66

Audible signalling equipment from Auer Signal is in the range between **60 dB and 127 dB.**

Talking:	50 dB
Jet:	120 dB
Pain threshold:	130 dB

ASX
90-127 dB
150-3.100 Hz

HPT
108 dB

TDE
88-100 dB, 2.800 Hz

ASS-P
94-103 dB
500-4.600 Hz

ESD
90 dB, 2.400 Hz

ESK
65 dB, 3.500 Hz

2. Tone and frequency

Audible signalling equipment produces different tones at different frequencies.

Electronic sounders and multi-tone alarm sounders

In electronic sounders from Auer Signal, the audible signal is generated electronically by a microprocessor, before being enhanced and then emitted by a loudspeaker. In smaller devices, sound capsules are used as loudspeakers, whilst pressure chamber or traditional loudspeakers are deployed in more powerful devices.

A wide range of tones and frequencies can be produced.

ASX
Electronic multi-tone alarm sounders

Given that the audible signal is generated electronically, electronic sounders from Auer Signal can produce a wide range of different tones and frequencies. The advantage of this is that there is a huge choice of tones available, meaning that several clearly distinguishable signals can be assigned to different meanings or areas of application. There is also the option of implementing special customer-specific solutions for tones.

As well as the tone, the volume of the electronic sounders/multi-tone alarm sounders can also be individually adjusted in the majority of the devices supplied by Auer Signal.

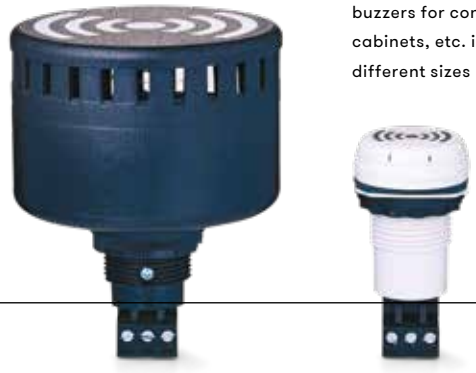
Piezo buzzers

Piezoelectric crystals change shape when voltage is applied. Use is made of this property, with piezoelectric crystals being attached to a brass disc and voltage being applied at short intervals. This causes the crystal to vibrate against the disc and generate noise, with frequencies of up to 4000Hz being reached.

If a special design measure based on the resonance principle is taken, extremely high sound pressures can be reached using this method.

Piezo buzzers afford the advantage that extremely high sound pressure levels can be produced despite a compact design, low energy consumption and relatively cost-effective price.

ESG AND ESV
High-volume panel-mount buzzers for control cabinets, etc. in different sizes



Small size, extremely high sound pressure and low energy consumption.

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