

CATÁLOGOS



Aparelhagem de Média Tensão

Normafix

Quadro de distribuição modular

até 24 kV
630 A
25 kA



CARACTERÍSTICAS ELÉCTRICAS

TENSÃO NOMINAL	kV	24	17,5	12
Celas Normafix				
Tensão de ensaio:				
- à frequência industrial (50 Hz - 1 min)	kV _{ef}	50	38	28
- ao choque (onda 1,2/50 μs)	kV _{crista}	125	95	75
Corrente de curta duração admissível, 3s	kA _{ef}	16	16	16 / 25*
Intensidade nominal do barramento	A		630	
Grau de protecção		IP3XC (IP superior sob consulta)		
Interruptor-seccionador ISF				
Corrente nominal	A		400 ou 630	
Corrente de curta duração admissível	kA _{ef}	16	16	16 / 25*
Poder de fecho	kA _{crista}	40	40	40 / 63*
Seccionador SF				
Corrente nominal	A		400 ou 630	
Corrente de curta duração admissível	kA _{ef}	16	16	16 / 25*
Disjuntor Diflu				
Corrente nominal	A		400 ou 630	
Poder de corte	kA _{ef}	16	16	16 / 25
Poder de fecho	kA _{crista}	40	40	40/63

* 1 segundo

Dimensões

	Largura (mm)				Profundidade (mm)	Altura (mm)
	375	500	750	1000	860	1550 / 1950*
IS						
CIS						
SBM						
DB						
DC						
TT						
CD						
NE						

■ Execução standard

* Na opção com compartimento de BT suplementar
Para mais detalhes ver Gama de Fabrico



Transformadores de Distribuição **Distribution Transformers**



CARACTERÍSTICAS TÉCNICAS • TECHNICAL DATA

NORMAFIX®

CARACTERÍSTICAS GERAIS

- Barramento em cobre
- Montagem de cabos secos até 240 mm²
- Compartimento suplementar baixa tensão
- Disjuntores de vácuo ou de SF₆
- Desenvolvido segundo as Normas Internacionais
- Visualização do seccionamento
- Controlo de presença de tensão e de concordância de fases
- Enclavamentos mecânicos e eléctricos
- Sistema de protecção contra o arco interno
- Simplicidade de instalação
- Vida eléctrica e mecânica acrescidas
- Sem manutenção
- Construção modular
- Extensível
- Concebido para instalação em PT's de exterior

GENERAL CHARACTERISTICS

- Copper busbar
- Up to 240 mm² dry cables assembly
- Low voltage supplementary compartment
- Vacuum or SF₆ circuit breakers
- According with international standards
- Sectioning visualization
- Live cables signalling and phase agreement measure
- Mechanical and electric interlocks
- Internal arc protection system
- Easy to install
- Increased mechanical and electrical life
- Without maintenance
- Modular Construction
- Extensible
- Developed to be installed in external Transformer substations

CARACTERÍSTICAS TÉCNICAS / TECHNICAL DATA

CARACTERÍSTICAS ELÉCTRICAS / ELECTRICAL DATA

Tensão nominal Rated voltage	kV	24	36
Nível de isolamento/Insulation level:			
- ao choque (1,2/50 µs) - lightning impulse (1,2/50 µs)	kV pico/peak	125	170
- à frequência industrial (50Hz/1min) - power frequency (50Hz/1min)	kV eficaz/r.m.s.	50	70
Corrente nominal do barramento Busbar rated current	A	630	630
Corrente de curta duração admissível Rated short-time withstand current	kA eficaz/r.m.s.	16 (3s)	16 (3s)
Grau de protecção dos invólucros Protection degree (enclosures)		IP3XC (grau superior, sob consulta) (higher degree upon request)	IP3XC (grau superior, sob consulta) (higher degree upon request)
INTERRUPTOR ISF / ISF SWITCH DISCONNECTOR			
Corrente nominal Rated current	A	400 ou/or 630	400 ou/or 630
Corrente de curta duração admissível Rated short-time withstand current	kA eficaz/r.m.s.	16 (3s)	12.5 - 16 (3s)
Poder de fecho Making capacity	kA pico/peak	40	31.5 - 40
SECCIONADOR SF / SF SWITCH			
Corrente nominal Rated current	A	400 ou/or 630	400 ou/or 630
Corrente de curta duração admissível Rated short-time withstand current	kA eficaz/r.m.s.	16 (3s)	16 (3s)
DISJUNTOR / CIRCUIT BREAKER			
Corrente nominal Rated current	A	400 ou/or 630	400 ou/or 630
Poder de corte Breaking capacity	kA eficaz/r.m.s.	16	16
Poder de fecho Making capacity	kA pico/peak	40	40

Características Gerais

General Data

Este catálogo contém as características técnicas dos transformadores trifásicos de distribuição de 50 a 2500 kVA, herméticos, imersos em óleo mineral e para instalação interior ou exterior.

São fabricados de acordo com a norma CEI 76.

Tensões Normalizadas

- Alta tensão: até 36 kV;
Regulação $\pm 5\%$ por comutador manobrável fora de tensão.
- Baixa tensão: 400 V

Ligações

- 50 e 100 kVA: Yzn5
- 160 a 2500 kVA: Dyn5

Frequência

- 50 Hz (60 Hz em opção)

This catalogue shows the specifications of the three-phase distribution transformers mineral oil filled and hermetically sealed, for indoor or outdoor installation, from 50 to 2500 kVA.

They are in accordance with the IEC 76 Standard.

Standard Voltages

- High voltage: up to 36 kV;
Tapping range $\pm 5\%$ by an Off-circuit tap changer.
- Low voltage: 400 V

Connection symbols

- 50 and 100 kVA: Yzn5
- 160 to 2500 kVA: Dyn5

Frequency

- 50 Hz (optionally 60 Hz)

Níveis de Isolamento e Ensaio (kV)

Insulation and Test levels (kV)

Tensão mais elevada Highest voltage	7,2	12	17,5	24	36
Tensão nominal Rated voltage	6	10/11	15	20	30
Ensaio à frequência industrial Power frequency test	20	28	38	50	70
Ensaio à onda de choque Lightning impulse test	60	75	95	125	170

Equipamento Normal e Acessórios

- Travessias de alta tensão
- Travessias de baixa tensão
- Comutador de regulação $\pm 5\%$ manobrável fora de tensão
- Rodados amovíveis e reversíveis
- Terminal de terra
- Olhais de suspensão
- Cor: RAL 6011 (outras sob pedido)

Fittings and Standard Accessories

- High voltage bushings
- Low voltage bushings
- Off-circuit tap changer with a tapping range of $\pm 5\%$
- Flat bi-direccional wheels
- Earthing terminal
- Lifting lugs
- Colour: RAL 6011 (others under request)

Outras características sob pedido

Other characteristics on request.

Hermetically Sealed Distribution Transformers



Tensão mais elevada 36 kV - BT 400V Highest voltage 36 kV - LV 400 V

Potência Rated power	kVA	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500
Perdas em vazio No-load losses	W	500	590	700	820	1000	1170	1400	1650	1900	2250	2650	3050	3650
Perdas devidas à carga (a 75 °C) Load losses (at 75 °C)	W	2550	2900	3600	4150	5050	5650	6650	8300	10400	12400	15800	18000	22500
Tensão CC (a 75 °C) Impedance voltage (at 75 °C)	%	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0
Corrente Nominal (BT) Rated current (LV)	A	230,9	288,7	360,8	454,7	577,4	721,7	909,3	1155	1443	1804	2309	2887	3608
Corrente CC (BT) Short-circuit current (LV)	kA	4,6	5,8	7,2	9,1	11,5	14,4	18,2	23,1	28,9	36,1	46,2	57,7	72,2
Rendimentos (a 75 °C) Efficiency (at 75 °C)														
Cos φ = 1,0	25%	98,35	98,46	98,52	98,63	98,68	98,78	98,85	98,92	98,98	99,03	99,09	99,17	99,19
	50%	98,58	98,69	98,72	98,82	98,87	98,97	99,03	99,07	99,10	99,14	99,18	99,25	99,26
	75%	98,39	98,52	98,55	98,66	98,72	98,84	98,91	98,95	98,97	99,02	99,04	99,12	99,13
	100%	98,09	98,26	98,28	98,42	98,49	98,64	98,72	98,76	98,77	98,83	98,85	98,95	98,95
Cos φ = 0,8	25%	97,94	98,07	98,15	98,29	98,36	98,48	98,56	98,64	98,73	98,79	98,86	98,96	98,99
	50%	98,22	98,36	98,40	98,53	98,59	98,71	98,78	98,84	98,88	98,93	98,97	99,06	99,07
	75%	97,99	98,15	98,18	98,33	98,40	98,55	98,64	98,68	98,71	98,77	98,80	98,90	98,91
	100%	97,62	97,82	97,85	98,03	98,11	98,30	98,40	98,45	98,46	98,54	98,56	98,68	98,69
Queda de Tensão (a 75 °C) Voltage drop (at 75 °C)														
Cos φ = 1,0	%	1,71	1,56	1,55	1,43	1,38	1,25	1,17	1,16	1,16	1,11	1,11	1,02	1,02
Cos φ = 0,8	%	4,16	4,07	4,07	4,00	3,96	3,88	3,83	3,82	3,82	3,79	3,79	3,73	3,73
Nível de potência sonora (L _{WA}) Sound power level (L _{WA})	dB(A)	62	65	65	65	68	69	70	73	73	74	75	75	77

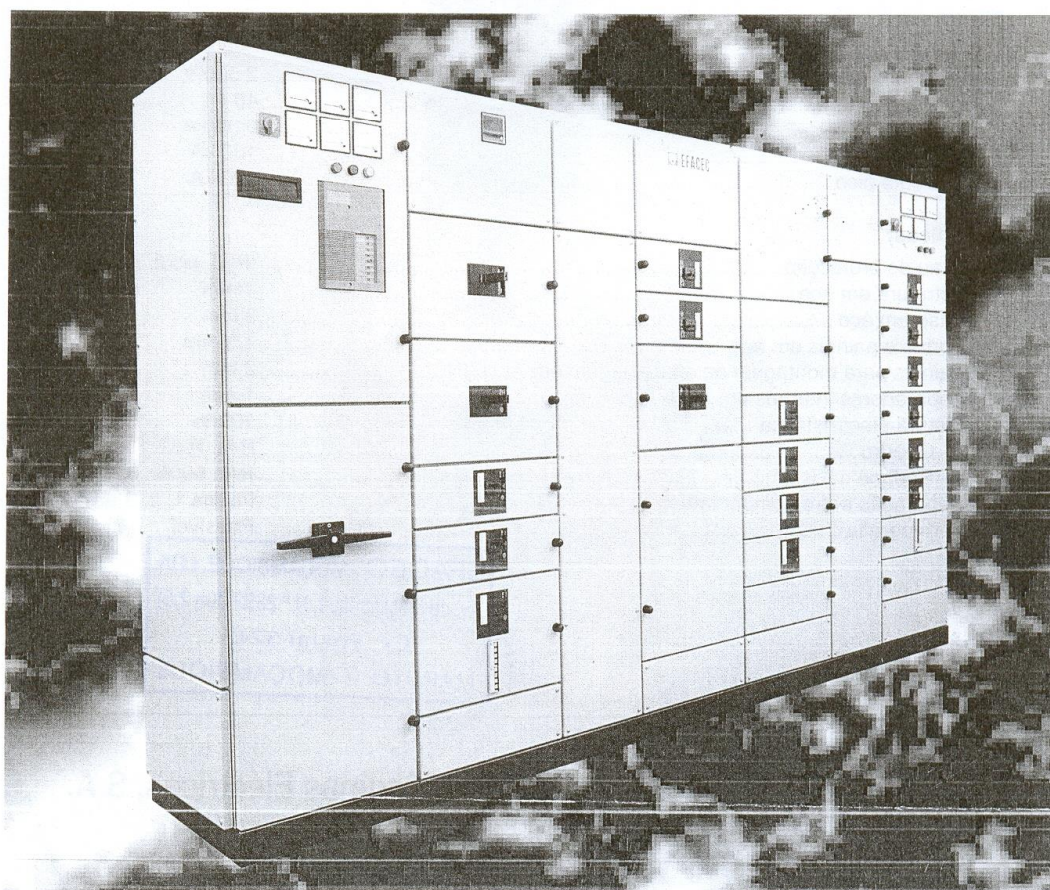


Quadros de Baixa Tensão

Divisão Aparelhagem Média Tensão

Série EFACENTER

660 V
6 300 A
100 kA/1s



A fabricação pela EFACEC de QUADROS DE BAIXA TENSÃO normalizados, tem como objectivo principal cobrir as necessidades de:

- **Distribuição de Potência (PC - Power Center)**
- **Comando e Protecção de Motores (MCC - Motor Control Center)**

A segurança do operador e dos equipamentos foi uma das grandes preocupações no desenvolvimento desta nova gama.

Os quadros poderão ser dotados de um sistema de conduta de exaustão que, em caso de arco interno, permite a saída dos gases libertados sem afectar pessoas e equipamentos. Este sistema foi ensaiado de acordo com as normas CEI 298 e directiva PEHLA nº 4.

O quadro EFACENTER pode ser fornecido com equipamento nas versões fixa e extraível, permitindo ainda a montagem de cartas electrónicas em RACK.

Esta gama está também disponível em aço inox, para situações especiais, sob pedido expresso do cliente.

NORMAS E ENSAIOS

Normas

- CEI 439-1
- BS 5486
- VDE 0660

Ensaios

- KEMA - Holanda
- ASTA - Inglaterra

CARACTERÍSTICAS TÉCNICAS

Eléctricas:

- Tensão 660 V
- Tensão de ensaio 2 500 V
- Frequência 40-60 Hz
- Intensidade 6 300 A
- Icc (1s) 100 kA
- Corrente pico 220 kA

Mecânicas:

- Grau de protecção IP20, IP22, IP44, IP54
- Estrutura em aço 2 mm
- Base em aço 3 mm
- Portas e painéis em aço 1,5 mm
- Painéis para montagem de aparelhagem em ALUZINC 2 mm
- Separadores internos em ALUZINC 1 mm
- Pintura electrostática 100 %
 - Quadro RAL 7032
 - Rodapé RAL 9005
- Separação entre compartimentos Forma 1, 2, 3 ou 4
- Termografia Possível



Os produtos constantes desta publicação estão sujeitos a alterações sem aviso prévio



EFACEC, Empresa Fabril de Máquinas Eléctricas, S.A.
DIVISÃO APARELHAGEM MÉDIA TENSÃO

General presentation

System P

Examples of switchboard configurations

Presentation

Incomer

Compact NS1000 4P

Fixed, front connection
Toggle
Supply via Canalis

Distribution

Linery busbars

Outgoing devices

Compact NS250

Horizontal
Fixed, front connection
Toggle

Supply	Prefabricated connection
Connection	Transferred to cable compartment, W = 300 mm

Compact NS400

Horizontal
Fixed, front connection
Toggle

Supply	Prefabricated connection
Connection	Transferred to cable compartment, W = 300 mm

Multi 9 devices

Supply	Comb busbars
Cable running	Cable straps Trunking

Connection	Terminal block at bottom of cubicle
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Motor protection devices

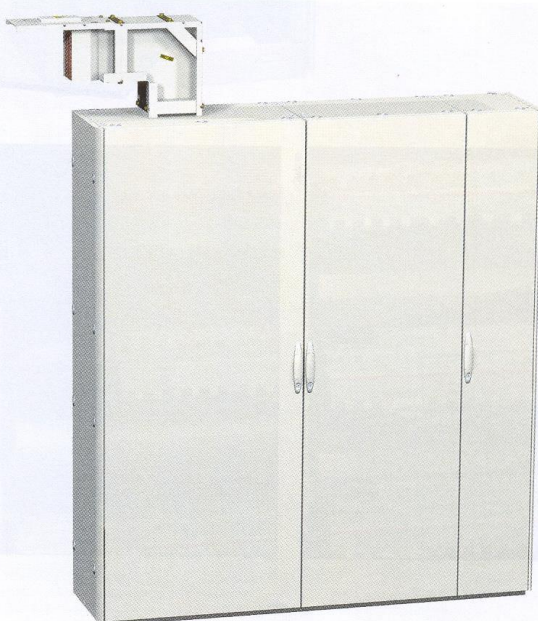
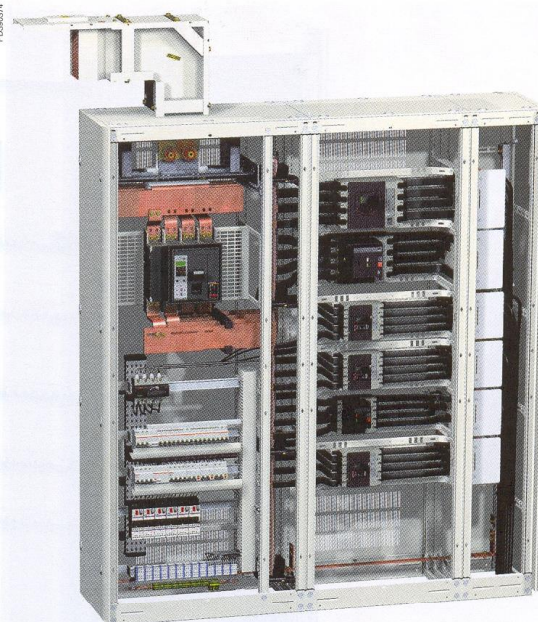
Supply	Comb busbars
Cable running	Cable straps Trunking

Connection	Terminal block in the cable compartment, W = 300 mm
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Enclosure

Cubicle for devices	W = 800/650 mm D = 400 mm
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Cable compartment	W = 300 mm D = 400 mm
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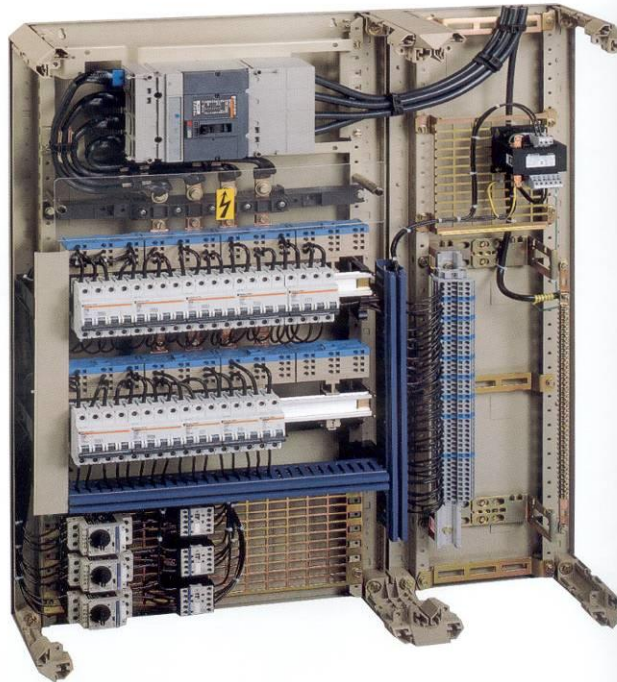


	- Vista interior de um quadro de distribuição tipo Prisma P, a montar sobre o pavimento na vertical/ Interior view of a Prisma P distribution frame, mounted on masonry base
	- Vista interna de um envólucro de quadro eléctrico de distribuição, realçando-se a porta metálica e fechadura com chave/ Internal view of an electrical switchboard enclosure, highlighting the metal door and keyed lock.
	- Quadro tipo Prisma G com acessório Mrlin Gerin montados faltando apenas a porta/ switchboard type Prisma G with Mrlin Gerin attachment fitted missing only the door

The Prisma G system: concentrated know-how up to 630 A



Some bonsais, several hundred years old but a mere 70 cm high, nevertheless concentrate the same vital functions as the tallest trees. Similarly, the Prisma G functional system, with its concentrated know-how and techniques, enables production of all types of electrical distribution switchboards up to 630 A in the tertiary sector and industry.



Multiclip distribution blocks, directly connected to a busbar at the back of the switchboard, supply the modular rows.
 Polybloc distribution block directly downstream of the incomer unit. The Multi 9 rows are supplied by comb busbars, with connection on terminals in the duct.



Ease of implementation

The Prisma G functional system enclosures have a rigid base incorporating the chassis. The switchgear is installed and connected flat down on the table, thereby ensuring access to the entire floor standing enclosure without need to bend down. Accessibility is complete. On site, the fully detachable panels and removable plinth allow direct access to the switchgear.



Direct installation of the devices at the back of the enclosure.



Simple fitting of panels once the equipment is complete.





HIMOINSA



MODEL
HFW-100 T5
INDUSTRIAL RANGE
Standard soundproofing
Powered by FPT_IVECO

-  D10
-  WATER-COOLED
-  THREE PHASE
-  50 HZ
-  STAGE 3A
-  DIESEL

Generating Rates



SERVICE		PRP	STANDBY
Power	kVA	100	109
Power	kW	80	87
Rated Speed	r.p.m.	1.500	
Standard Voltage	V	400/230	
Available Voltages	V	230 - 230/132	
Rated at power factor	Cos Phi	0,8	

01

HIMOinsa Company with quality certification ISO 9001

HIMOinsa gensets are compliant with EC mark which includes the following directives:

- 2006/42/CE Machinery safety.
- 2014/30/UE Electromagnetic compatibility.
- 2014/35/UE electrical equipment designed for use within certain voltage limits
- 2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by 2005/88/EC)
- 97/68/EC Emissions of gaseous and particulate pollutants. (amended by 2002/68/EC & 2004/26/EC)
- EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2005 normative: 1000 mbar, 25°C, 30% relative humidity.

Prime Power (PRP):

According to ISO 8528-1:2005, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24 h of operation shall not exceed 70 % of the PRP.

Emergency Standby Power (ESP):

According to ISO 8528-1:2005, Emergency standby power is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP

G2 class load acceptance in accordance with ISO 8528-5:2005

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HIMOINSA

MODEL
HFW-100 T5
INDUSTRIAL RANGE
Standard soundproofing
Powered by FPT_IVECO

Engine Specifications 1.500 r.p.m.

ENGINE		PRP	STANDBY
Rated Output	kW	89	98
Manufacturer		FPT_IVECO	
Model		NEF45TE2F	
Engine Type		4-stroke diesel	
Injection Type		Direct, common rail	
Aspiration Type		Turbocharged and after-cooled	
Number of cylinders and arrangement		4 - L	
Bore and Stroke	mm	104 x 132	
Displacement	L	4,5	
Cooling System		Liquid (water + 50% glycol)	
Lube Oil Specifications		ACEA E3 - E5	
Compression Ratio		17,5:1	
Fuel Consumption Standby	l/h	24,8	
Fuel Consumption 100% PRP	l/h	22,8	
Fuel Consumption 80 % PRP	l/h	18,7	
Fuel Consumption 50 % PRP	l/h	13,4	
Lube oil consumption with full load		0,1 % of fuel consumption	
Total oil capacity including tubes, filters	L	12,8	
Total coolant capacity	L	18,5	
Governor	Type	Electrical	
Air Filter	Type	Dry	

02

Generator

Generator		
Poles	No.	4
Connection type (standard)		Star-series
Mounting type		S-3 11"1/2
Insulation	Class	H class
Enclosure (according IEC-34-5)		IP23
Exciter system		Self-excited, brushless
Voltage regulator		A.V.R. (Electronic)
Bracket type		Single bearing
Coupling system		Flexible disc
Coating type		Standard (Vacuum impregnation)



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HIMOINSA

MODEL
HFW-100 T5
INDUSTRIAL RANGE
Standard soundproofing
Powered by FPT_IVECO

Application Data

Exhaust System

Maximum exhaust temperature	°C	460
Maximum allowed back pressure	kPa	5
Exhaust Flange Size (external diameter)	mm	90
Heat dissipated by exhaust pipe	KCal/Kwh	608

Necessary Amount Of Air

Intake air flow	m ³ /h	525
Cooling Air Flow	m ³ /s	2,2
Alternator fan air flow	m ³ /s	0,514

Starting System

Starting power	kW	3
Starting power	CV	4,08
Recommended battery	Ah	100
Auxiliary Voltage	Vdc	12

Fuel System

Fuel Oil Specifications		Diesel
Fuel Tank	L	288
Other fuel tank capacities	L	450, 850

03



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ORDERING DATA

DESCRIPTION	HT m	HM m	E m	U m	D mm	C mm
K 18 76 20	2.6	2.0	0.6	0.5	121	400
K 18 76 25	3.1	2.5	0.6	0.5	131	400
K 18 76 30	3.6	3.0	0.6	0.5	135	400
K 18 76 35	4.1	3.5	0.6	0.5	146	400
K 18 76 40	4.6	4.0	0.6	0.5	157	400
K 18 76 45	5.2	4.5	0.7	0.5	168	400
K 18 76 50	5.7	5.0	0.7	1.0	177	400
K 18 76 55	6.3	5.5	0.8	1.0	180	400
K 18 76 60	6.9	6.0	0.9	1.0	184	400
K 18 76 65	7.4	6.5	0.9	1.0	192	400
K 18 76 70	8.0	7.0	1.0	1.0	202	400
K 18 76 75	8.6	7.5	1.1	1.0	210	400
K 18 76 80	9.2	8.0	1.2	1.0	220	500
K 18 76 85	9.8	8.5	1.3	1.0	230	600
K 18 76 90	10.4	9.0	1.4	1.0	230	600
K 18 76 95	11.0	9.5	1.5	1.0	240	700
K 18 76 100	11.6	10.0	1.6	1.0	250	800
K 18 76 105	12.2	10.5	1.7	1.0	300	800
K 18 76 110	12.8	11.0	1.8	1.0	310	800
K 18 76 115	13.4	11.5	1.9	1.0	320	800
K 18 76 120	14.0	12.0	2.0	1.0	340	1 000



HT	Total length
HM	Mounting height
D	Base diameter
C	Depth of cable entry
U	Access door height
E	Buried depth

NOTE: All measurements are approximate

COLOUR CHART

(For indication purposes only)

K100 White	K302 Paris Blue	K400 Signal Red
K200 Black	K340 Strong Blue	K530 Mid Bruns Green
K541 Brilliant Green	K640 Sandstone	K705 Dark Earth
K600 Canary Yellow	K641 Traffic Yellow	K713 Chocolate Brown
K800 Bright Orange	K913 Mineral Grey	K916 Charcoal
K918 Birch Grey		

DESIGNED AND MANUFACTURED BY
BEKA (PTY) LTD - SOUTH AFRICA
MANUFACTURERS OF LUMINAIRES AND GLASS FIBRE POLES

017 001

CAIXAS ESTANQUES E BUCINS

- GARANTIA DE POUPANÇA DE 50% DE TEMPO NA MONTAGEM
- FECHO POR PRESSÃO (REF. 219 E 220) OU POR PARAFUSO 3/4 DE VOLTA
- PAREDES LISAS, OU PAREDES MARCADAS PARA BUCINS OU BOQUILHAS

CAIXAS ESTANQUES COM ENTRADAS MARCADAS (PARA USO DE BUCINS)

NORMAS IEC 695-2-1; IEC 998-1; IEC 670; IEC 529; DIN 46320

REF:	DIMENSÕES INTERIORES (mm)	FECHO	Nº DE ENTRADAS	IP	BUCIM OU BOQUILHA	CABOS/TUBOS Ø min. e máx.	EMB.
220-A	80 x 80 x 50	pressão	7	54	PG16	11-14	10
222-A	100 x 100 x 55	parafuso 3/4 volta	6	65	PG16	11-14	6
223-A	175 x 110 x 66	parafuso 3/4 volta	10	65	PG16	11-14	3
223-ATA	175 x 110 x 83	parafuso 3/4 volta	10	65	PG16	11-14	3
224-A	220 x 170 x 120	parafuso 3/4 volta	10	65	2 PG29 +8 PG21	14-25	2
225-A	190 x 150 x 80	parafuso 3/4 volta	10	65	2 PG29 +8 PG21	14-25	3



CAIXAS ESTANQUES COM BOQUILHAS

NORMAS IEC 695-2-1; IEC 998-1; IEC 670; IEC 529; DIN 46320

REF:	DIMENSÕES INTERIORES (mm)	FECHO	Nº DE ENTRADAS	IP	BUCIM OU BOQUILHA	CABOS/TUBOS Ø min. e máx.	EMB.
219-B	ø 80 x 45	pressão	4	54	PG21		8
220-B	80 x 80 x 50	pressão	7	54	PG16		10
222-B	100 x 100 x 55	parafuso 3/4 volta	6	54	PG21	3,5 - 20,4	6
223-B	175 x 110 x 66	parafuso 3/4 volta	10	54	PG21		3
223-BTA	175 x 110 x 83	parafuso 3/4 volta	10	54	PG21	4 - 24	3
224-B	220 x 170 x 120	parafuso 3/4 volta	10	54	PG29	3,5 - 32	2
225-B	190 x 150 x 80	parafuso 3/4 volta	10	54	PG21	4 - 24	3

CAIXAS ESTANQUES COM PAREDES LISAS

NORMAS IEC 695-2-1; IEC 998-1; IEC 670; IEC 529; DIN 46320

REF:	DIMENSÕES INTERIORES (mm)	FECHO		IP		EMB.
222-L	100 x 100 x 55	parafuso 3/4 volta		65		6
223-L	175 x 110 x 66	parafuso 3/4 volta		65		3
223-LTA	175 x 110 x 83	parafuso 3/4 volta		65		3
224-L	220 x 170 x 120	parafuso 3/4 volta		65		2
225-L	190 x 150 x 80	parafuso 3/4 volta		65		3

CAIXAS ESTANQUES COM PAREDES LISAS COM TAMPA TRANSPARENTE

NORMAS IEC 695-2-1; IEC 998-1; IEC 670; IEC 529; DIN 46320

223-LTATR	175 x 110 x 83	parafuso 3/4 volta		65		3
224-LTR	220 x 170 x 120	parafuso 3/4 volta		65		2

TUBO JOTAGRIS E ACESSÓRIOS



REF.	DESIGNAÇÃO	DIMENSÕES Ø	RESISTÊNCIA MECÂNICA	EMB.
ERFE 16	TUBO JOTAGRIS "ERFE",	16	M7	100 MT
ERFE 20	CINZENTO, PARA	20	M7	100 MT
ERFE 25	INSTALAÇÕES INTERIORES	25	M7	50 MT
ERFE 32	EM BETÃO ARMADO	32	M7	50 MT
ERFE 40	(ver características técnicas)	40	M7	50 MT
ERFE 16G	TUBO JOTAGRIS "ERFE",	16	M7	100 MT
ERFE 20G	CINZENTO, PARA	20	M7	100 MT
ERFE 25G	INSTALAÇÕES INTERIORES	25	M7	50 MT
ERFE 32G	EM BETÃO ARMADO, COM	32	M7	50 MT
ERFE 40G	GUIA	40	M7	50 MT
U - 16	UNIÕES PARA TUBO JOTAGRIS	16	M7	100
U - 20		20	M7	100
U - 25		25	M7	100
U - 36		32	M7	50
B - 16	BOQUILHAS PARA TUBO	16	M7	100
B - 20	JOTAGRIS	20	M7	100
B - 25		25	M7	100
841	CAIXA DE DERIVAÇÃO		M7	10
842	TAMPA DE FIXAÇÃO		M7	10
843	ESTANQUE PARA CAIXA 841 TAMPA DE ACABAMENTO PARA CAIXA 841		M7	10
831	CAIXA DE RESERVA		M7	10
832	TAMPA DE FIXAÇÃO ESTANQUE PARA CAIXA 831		M7	10
821	CAIXA DE RESERVA		M7	10
822	TAMPA DE FIXAÇÃO ESTANQUE PARA CAIXA 821		M7	10
823	TAMPA DE ACABAMENTO PARA CAIXA 821		M7	10
811	CAIXA DE APARELHAGEM		M7	10
812	TAMPA "DIAFRAGMA" PARA CAIXA 811		M7	10
813	TAMPA Mergulhável para CAIXA 811		M7	10
814	MANGA PARA CAIXA 811		M7	10
801	CAIXA TECTO TIPO "PAGODE"		M7	10
802	TAMPA ESTANQUE P/ CAIXA 801		M7	10
803	TAMPA DE ACABAMENTO P/CAIXA 801 (preparada para suspensão)		M7	10
804	SUSPENSÃO PARA CAIXA 831		M7	10

VER CARACTERÍSTICAS TÉCNICAS

MATERIAL DE FIXAÇÃO

ABRAÇADEIRAS DE APERTO MECÂNICO (PARAFUSOS EM AÇO ZINCADO)

PARA CABOS E TUBOS

CERTIFICADO DE CONFORMIDADE Nº ELS 034/93 DO IEP



REF.	DIMENSÕES DE APERTO Min - Max ø mm	EMB.	DADOS TÉCNICOS
305	6 - 14	100	Ver características técnicas e dimensões
306	10 - 18	100	
307	15 - 28	50	
308	30 - 40	25	
309	40 - 65	10	
305/2	2 x 7 - 14	100	Côr: creme, cinzento, preto e branco
306/2	2 x 10 - 18	50	
305/3	3 x 7 - 14	50	
306/3	3 x 10 - 18	25	

ABRAÇADEIRAS DE APERTO MECÂNICO (PARAFUSOS EM NYLON)

PARA CABOS E TUBOS

CERTIFICADO DE CONFORMIDADE Nº ELS 030/93 DO IEP



REF.	DIMENSÕES DE APERTO Min - Max ø mm	EMB.	DADOS TÉCNICOS
905	5 - 14	100	Ver características técnicas e dimensões
906	6 - 17	100	
907	15 - 25	50	
908	24 - 34	25	
905/2	2 x 5 - 14	100	Côr: creme, cinzento, preto e branco
906/2	2 x 6 - 17	50	

60



PLACAS DE BORNES

REF.	MONTAGEM	Nº DE BORNES (até 4mm ²)	OBS.	EMB.
397/2	parafuso	2	UNIVERSAL	20
397/3	parafuso	3		20
397/4	parafuso	4		20
397/3A	encaixe por pressão	3	PARA MONTAGEM AS CAIXAS JSL REF.220-A E B, REF. 222-A, B E L	20
397/5	encaixe por pressão	5 (possibilidade 3P+N+T)	PARA MONTAGEM NAS CAIXAS JSL REF.220-A E B, REF. 222-A, B E L	20

BARRAS DE JUNÇÃO

REF.	CAPACIDADE NOMINAL	NÚMERO DE JUNÇÕES	EMB.
261/2,5-4	2,5-4 mm ²	12	50
361/6	6 mm ²	12	50
361/10	10 mm ²	12	50
363	16 mm ²	12	25
361/25	25 mm ²	12	25

PATERES OU BASES PARA INTERRUPTORES E TOMADAS EXTERIORES

REF.	DIMENSÕES Ø	OBSERVAÇÕES	EMB.
330	58 mm	PARA PROTEGER E ISOLAR INTERRUPTORES E TOMADAS NAS PAREDES EXTERIORES	100
331	65 mm		100
332	68 mm		100
333	80 mm		100
484/3-T	60x60 mm		100

SUPORTES PARA LÂMPADAS FLUORESCENTES RECTILÍNEAS

REF.	DESIGNAÇÃO	EMB.
349	SIMPLES	50
350	COM PORTA-ARRANCADOR	25
478	SIMPLES COM MOLA E LIGAÇÃO ESPECIAL	50
479	COM PORTA-ARRANCADOR, MOLA E LIGAÇÃO ESPECIAL	25
392	PARA TOPO (BOLACHA) E LIGAÇÃO ESPECIAL	100
353	PORTA-ARRANCADOR EM LIGAÇÃO ESPECIAL	50
354	CALÇO PARA SUPORTE 349	50



SUPORTES PARA LÂMPADAS FLUORESCENTES CIRCULARES

REF.	DESIGNAÇÃO	EMB.
355	SIMPLES COM UNHA	50
356	COM LIGAÇÕES	25

73

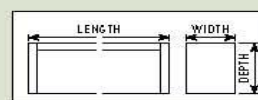
LUMINÁRIAS/ LUMINAIRES

G

230V / Ceiling Lights / Fluorescent



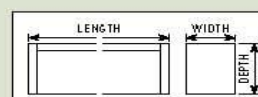
KB12 - KB14 - KB15



KB12 - KB14 - KB15



KB22 - KB24 - KB25



KB22 - KB24 - KB25

Metal body with perex diffuser											
Code	Class	IP	QC	Lamp			Dimensions (mm)			Colour/s	Accessory
				Base  G13	Type	 Ballast included	Length	Width	Depth		
										 White body Prismatic diffuser	 XBACKUP/FT Emergency backup available
KB12	I	20	31	2ft 1 x 18w	T8	+	645	100	87	+	+
KB14	I	20	31	4ft 1 x 36w	T8	+	1256	100	87	+	+
KB15	I	20	31	5ft 1 x 58w	T8	+	1570	72	92	+	+
KB22	I	20	31	2ft 2 x 18w	T8	+	645	175	65	+	+
KB24	I	20	31	4ft 2 x 36w	T8	+	1256	175	65	+	+
KB25	I	20	31	5ft 2 x 58w	T8	+	1570	213	72	+	+

Tipo B: Armadura fluor. 2x36W com difusor prismático transparente, de montagem saliente, com lâmpadas/ 2x36W Fluorescent luminaire with a prismatic transparent difusor with lamps, surface mount, IP20.

Tipo B1: Armadura fluorescente 1x36W com difusor prismático transparente, de montagem saliente, com lâmpadas, IP20/ 1x36W Fluorescent luminair with a prismatic transparent difusor with lamps, surface mount, IP20.

Tipo B2: Armadura fluorescentes 1x18W com difusor prismático transparente, de montagem saliente, com lâmpadas, IP20/ 1x18W Fluorescent luminair with a prismatic transparent difusor with lamps, surface mount, IP20.

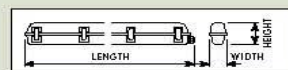
Tipo C, C1 e C2

G

230V / Ceiling Lights / Fluorescent / Vapour proof



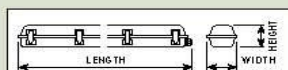
KB60 • KB62 • KB64



KB60 • KB62 • KB64



KB61 • KB63 • KB65



KB61 • KB63 • KB65

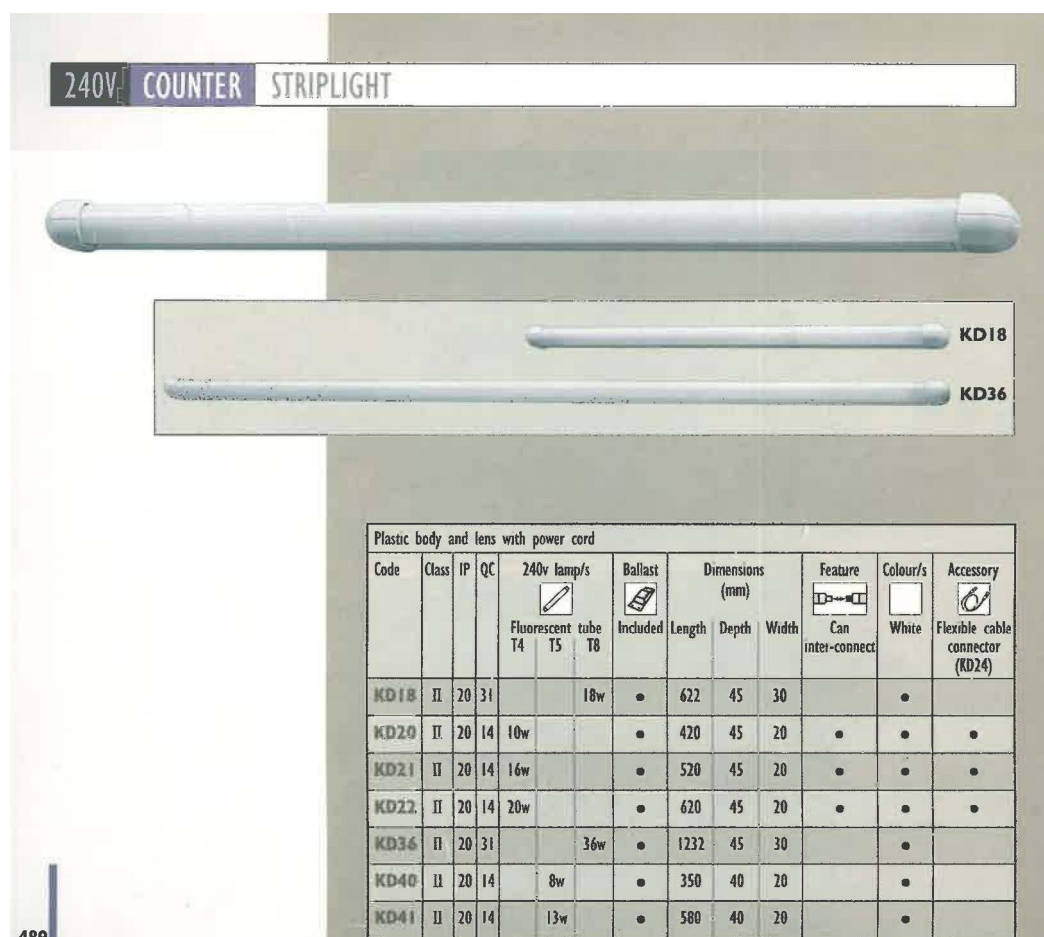
ABS base, prismatic polycarbonate diffuser with stainless steel mounting bracket												
Code	Class	IP	QC	Lamp		Ballast	Dimensions (mm)			Feature	Colour/s	Accessory
				Base	Type		Length	Depth	Width			
												
				G13		Included Electronic				Vapour proof	Light grey base Clear diffuser	XB BACKUP/FT Emergency backup available
KB60	I	65	24	2ft 1x 18w	T8	+	655	92	89	+	+	+
KB61	I	65	24	2ft 2x 18w	T8	+	655	92	130	+	+	+
KB62	I	65	24	4ft 1x 36w	T8	+	1265	92	89	+	+	+
KB63	I	65	24	4ft 2x 36w	T8	+	1265	92	130	+	+	+
KB64	I	65	24	5ft 1x 58w	T8	+	1565	92	89	+	+	+
KB65	I	65	24	5ft 2x 58w	T8	+	1565	92	130	+	+	+

Tipo C: Armadura fluorescente 2x36W, estanque com difusor em policarbonato, montagem saliente com lâmpadas, IP65/ 2x36W tight fluorescent luminaire with polycarbonate difuser with lamps, surface mount, IP65.

Tipo C1: Armadura fluorescente 1x36W, estanque com difusor em policarbonato, com lâmpadas, IP65/ 1x36W tight fluorescent luminaire with polycarbonate difuser with lamps, surface mount, IP65.

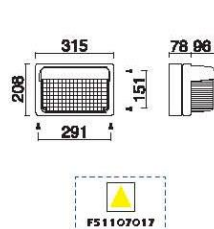
Tipo C2: Armadura fluorescente 1x18W, estanque com difusor em policarbonato montagem saliente com lâmpadas, IP65/ 1x18W tight fluorescent luminaire with polycarbonate difuser with lamps, surface mount, IP65.

Tipo D



Tipo D: Aplique de parede para iluminação de espelho, corpo em plástico difusor transparente com lâmpada 18W, IP20/ Wall light for mirror illumination, plastic body and lens, IP20.

Tipo E



SL 82 VS

	CL	IP
1000137	VS	55

Aplique de parede. Base em alumínio com pintura electrostática, difusor em policarbonato prismático transparente, balastro e condensador.

Wall mounted luminaire. Powder-coated aluminium base, clear prismatic polycarbonate diffuser, ballast and capacitor.



Tipo E: Candeeiro de iluminação exterior, base em alumínio, pintura electrostática a preto, difusor em polycarbonato prismático transparente, com balastro e condensador, lâmpadas de vapor de sódio 70W, IP55/ Outdoor lighting luminaire, powder-coated aluminum base, clear prismatic polycarbonate diffuser, ballast and capacitor, 70W sodium vapor lamps, IP55.

Tipo F:



OMEGA LED

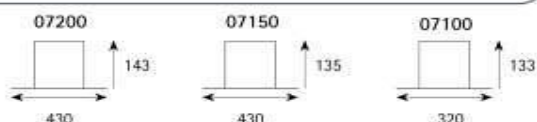
Armadura industrial com ledS CREE e potência a definir. A OMEGA Led tem o corpo realizado em lamelas de alumínio que permitem uma ótima ventilação do núcleo de leds, aumentando a sua durabilidade.

Cada Led da armadura contém uma optica especial com 112° de abertura, distribuindo de forma eficiente a luminosidade da mesma.

A nova OMEGA Led utiliza a mais avançada tecnologia de forma a poder ser uma alternativa real às lâmpadas de descarga existentes no mercado. Ideal para naves industriais ou espaços com tectos elevados (esta armadura deve ser colocada entre 6 a 8 metros de altura), permite uma redução do custo energético sem abdicar de luminosidade.



FICHA TÉCNICA



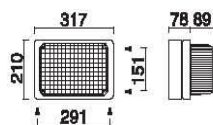
Ref.	Color	Lumens	Bulb/LED	CRI	Opening Degrees	Input Voltage
07080-2284	□	8100	PHILIPS/ CREE	>80	112°	AC 90-295V 50-60HZ
07100-2284	□	10000	PHILIPS/ CREE	>80	112°	AC 90-295V 50-60HZ
07150-2284	□	15050	PHILIPS/ CREE	>80	112°	AC 90-295V 50-60HZ
07200-2284	□	20100	PHILIPS/ CREE	>80	112°	AC 90-295V 50-60HZ

Lamp position: STD - standard
Light Source: LED
Luminaire luminous flux*: 20100 lm
Luminaire efficacy*: 107 lm/W
Lamp efficacy: 107 lm/W
Colour Rendering Index min.: 80
LOR: 1,00 ULOR: 0,00 DLOR: 1,00

Tipo F: Armadura industrial com ledS CREE 150W, corpo realizado em lamelas de alumínio que permitem uma ótima ventilação do núcleo do leds, aumentando sua durabilidade. Cada led da armadura tem uma óptica especial com 112° de abertura, distribuindo de forma eficiente a luminosidade da mesma, IP65./ Industrial armature with ledS CREE 150W, body made in aluminum lamellae that allow an optimal ventilation of the core of the leds, increasing its durability. Each led of the armature has a special optic with 112 ° of opening, efficiently distributing aluminosity of the same, IP65.

Tipo G

ILUMINAÇÃO PÚBLICA SL | PUBLIC LIGHTING SL



SL 81 VS

1000133



VS

70W/I

230V

E27

I

55

Aplique de parede. Base em alumínio com pintura electrostática, difusor em policarbonato prismático transparente, balastro e condensador.

Wall mounted luminaire. Powder-coated aluminium base, clear prismatic polycarbonate diffuser, ballast and capacitor.



Tipo G: Candeeiro de iluminação exterior, base em alumínio, pintura electrostática a preto, difusor em policarbonato prismático transparente, com balastro e condensador, lâmpadas de vapor de sódio 70W, IP55/ Outdoor lighting lamp, aluminum base, black polyester paint, transparent prismatic polycarbonate diffuser, 70W sodium vapor lamps, IP55.

Tipo H, I J

BEKA STRADA HIGH WATTAGE STREETLIGHT LUMINAIRE RANGE



BEKA STRADA/SE



BEKA STRADA/BE



BEKA STRADA 250W - Flat Glass

**DESIGNED FOR LIGHTING OF GROUP A ROADS WHERE EFFICIENCY,
OPTICAL CONTROL AND EASE OF MAINTENANCE IS REQUIRED**

APPLICATIONS

- GROUP A STREETLIGHTING
- AREA LIGHTING
- SECURITY LIGHTING

FEATURES

- LAMP COMPARTMENT - IP66
- GEAR COMPARTMENT - IP66
- HIGH PRESSURE DIE CAST ALUMINIUM GEAR COMPARTMENT
- REMOVABLE CONTROL GEAR
- SUITABLE FOR USE WITH ELLIPTICAL OR TUBULAR LAMPS

CONSTRUCTION DETAILS

The luminaire consists of a separate lamp, gear and spigot compartment. The control gear housing is separated from the lamp housing for thermal reasons. It is designed to operate 250/400 Watt mercury vapour and 150/250/400 Watt high pressure sodium/metal halide lamps.

SABS MARKS

The luminaire bears the SABS 1277 mark and the SABS 1464 safety mark. Luminaire spigot entries comply with SABS 1088 - Table 1.
Side entry - 42 mm $\varnothing$ x 125 mm
Bottom entry - 76 mm $\varnothing$ x 75 mm

INGRESS PROTECTION

The luminaire has a degree of protection that complies with SABS 1222 and SABS 098: Part 1-1990 Code of Practice Table B-1.

Lamp compartment: IP65
Gear compartment: IP66

LAMP COMPARTMENT

- The housing is robustly constructed, weatherproof, hail proof, corrosion proof and vandal resistant.
- It is manufactured from filled ultra violet stabilized engineering polymer and is grey in colour.
- An exterior lip is provided on the lamp housing to avoid direct rain water contact with the gasket, thus ensuring that no moisture is sucked into the diffuser when the luminaire is switched off and cools down.
- The non-discolouring high-impact acrylic diffuser bowl has no external prisms and is held to the housing by three stainless steel clips. (Five in the 400W version). It remains attached to the housing when hinged open.
- The gasket sealing the lamp compartment is made of silicon sponge rubber and is fitted into a tongue and groove arrangement.
- Reflectors are manufactured from 99.98% super pure deep anodized aluminium and are not subject to accidental misalignment.
- The lamp holder complies with VC 8011, is rated to withstand 240° C/5kV and prevents possible loosening of the lamp caused by vibrations.

GEAR COMPARTMENT

- The control gear compartment is manufactured from high pressure

die cast aluminium to ensure excellent heat dissipation and optimum strength.

- It is covered by a hinged, non corrosive lid which fits into a silicon sponge gasket in the body, into a tongue and groove arrangement.
- The IP66 ingress protection rating ensures that all control gear components are protected against the ingress of dust and moisture, which leads to corrosion and premature failure.
- The control gear is mounted on a removable gear tray and is suitable for operation with the specified rating of the lamp on a 230V +3%/-10% 50 Hz single phase system.
- All control gear components are removable. Igniters, where applicable, are of the superposed pulse type. The luminaire is power factor corrected to a minimum of 0.85.

SPIGOT COMPARTMENT

- The separate spigot compartment houses the screw terminal block and wire clamp.
- No access to the control gear compartment is required for installation, thus possible damage to the control gear is avoided.
- An optional down facing miniature daylight switch can be fitted into this compartment, giving it protection against UV and ensuring extended service.

BEKASTRADA
HIGH WATTAGE STREETLIGHT
LUMINAIRE RANGE

ORDERING DATA

DESCRIPTION	LAMP	LUMEN	MASS (KG)
BEKASTRADA 250W MV	HME 250W	13 000	11.2
BEKASTRADA 400W MV	HME 400W	22 000	12.9
BEKASTRADA 150W HPS	HSE 150W	14 000	11.1
BEKASTRADA 150W HPS-T	HST 150W	14 500	11.1
BEKASTRADA 250W HPS	HSE 250W	25 000	13.5
BEKASTRADA 250W HPS-T	HST 250W	27 000	13.5
BEKASTRADA 400W HPS	HSE 400W	47 000	14.8
BEKASTRADA 400W HPS-T	HST 400W	48 000	14.8
BEKASTRADA 250W MH	HIE 250W	19 000	12.5
BEKASTRADA 250W MH-T	HIT 250W	20 000	12.5
BEKASTRADA 400W MH	HIE 400W	32 000	14.8
BEKASTRADA 400W MH-T	HIT 400W	32 000	14.8

Any other versions available on request.



OPTIONS & ACCESSORIES

SUFFIX	DESCRIPTION
/ BE	BOTTOM ENTRY
/ DLS-MINI	MINIATURE DAYLIGHT SWITCH, DOWNWARD FACING
/ FG	FLAT GLASS DIFFUSER (T VERSION ONLY)
/ MCB	INCORPORATED MCB 10A / 5kA
/ NEMA	INCORPORATED NEMA SOCKET ASS.
/ PCU	POWER CHANGE-OVER UNIT
/ PG	PAINTED GEARHOUSING, SPECIFY COLOUR
/ PITB	3 / 5 WAY - PLUG-IN TERMINAL BLOCK
/ SE	SIDE ENTRY

Tipo H,I,J: Candeeiros tipo BEKASTRADA equipados com lâmpada de vapor de sódio 150W, montagem em poste de fibra de vidro (H ã 2 candeeiros, I ã 4 candeeiros, J ã 1 candeeiros), IP65/ BEKASTRADA public lighting luminaire equipped with 150W sodium vapor lamp, fiber glass pole mount, IP65 (H - 2 lamps, I - 4 lamps, J - 1 lamps).

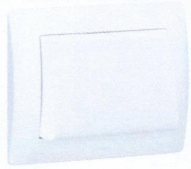
Aparelhagem de comando/ Switches



Galea™ Life
saída de cabos, obturadores, funções diversas

NOVO

Galea™ Life
sinalização luminosa



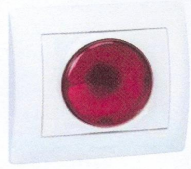
7759 85 equipado na versão Branco



7712 78 + 7712 01 equipado na versão Dark Bronze



7759 41 equipado na versão Titânio



7759 40 equipado na versão Branco

 Quadros de escolha acabamentos Galea™ Life : teclas e espelhos centrais (p. 463-467) e quadros (p. 468 e 469)

Funções diversas
Mecanismos com suporte metálico, fixação por garras ou parafuso. Sem espelho central

Emb.	Ref.	Descrição
10	7759 85	Saída de cabos (5 ligadores) Equipada com 5 ligadores para receber cabos de 1,5 mm ² Com cerra-cabos
10	7759 86	Saída de cabos sem ligadores Com braçadeira, sem ligadores

Obturadores
Sem cerra-cabos. Fornecidos com suporte metálico e espelho central (juntar quadro)

Emb.	Ref.	Descrição
10	7770 78	Obturador Branco
1	7712 78	Obturador Dark Bronze
1	7713 78	Obturador Soft Alumínio
1	7714 78	Obturador Titânio
1	7715 78	Obturador Pérola

Tomada equipotencial

Emb.	Ref.	Descrição
10	7759 88	Tomada de ligação equipotencial
10	7759 93	Ficha de regulação de potencial tipo DIN 42 801

Sinalizadores de balizagem
Mecanismos com suporte metálico, fixação por garras ou parafuso. Sem espelho central

Emb.	Ref.	Descrição
1	7759 40	Sinalizador de balizagem com lâmpada tipo E10 de 3 W Fornecido com difusor Vermelho
1	7759 43	Sinalizador de balizagem com lâmpada tipo E10 de 3 W Fornecido com difusor Transparente
1	7759 44	Sinalizador de informação com lâmpada tipo E10 de 3 W Fornecido com difusor Transparente
1	7758 39	Símbolos para sinalizador informação

Acessórios para sinalizador de balizagem

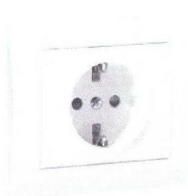
Emb.	Ref.	Descrição
10	7759 45	Difusor Transparente
10	7759 46	Difusor Verde
10	7759 47	Difusor Laranja
10	7759 48	Difusor Vermelho
1	7759 41	Piloto autónomo de balizagem 230 V~ - 50 Hz Extraível, pode funcionar como lanterna Autonomia de 1 hora Equipado com lâmpada de lente 2,2 V tipo E 10 - 0,25 A Acende-se automaticamente no caso de corte geral de energia Com indicador de bom funcionamento Fornecido com 2 acumuladores NiCd tipo KR 18/29 de 1,2 V - 0,5 A
1	7759 42	Lanterna de substituição para ref. 7759 41

Tomadas/ Sockets

legrand

Galea™ Life
tomadas de corrente

NOVO



7759 21 + 7715 21 + 7715 01
(versão Pérola)



7759 21 + 7770 29 + 7710 01
(quadro versão Branco)



7714 39 (versão Titânio)



7713 40 (versão Soft Alumínio)



Quadros de escolha acabamentos Galea™ Life : teclas e espelhos centrais (p. 463-467) e quadros (p. 468 e 469)

Emb.	Ref.	Tomadas de corrente 16 A - 250 V
		Mecanismos com suporte metálico, permitem fixação por garras ou por parafuso Com índice de protecção IP 2X
		Tomada 2P Fornecida sem espelho central
10	7759 16	 Tomada 2P ligadores de parafuso
		Tomadas 2P+T tipo "Schuko" Fornecidas sem espelho central (excepto ref. 7759 25)
		Ligadores de parafuso
10	7759 21	 2P+T tipo "Schuko"
10	7759 30	 2P+T tipo "Schuko" com encaixe para utilização com espelho ref. 7770 29
1	7759 25	 2P+T tipo "Schuko" com limitador de sobretensões e sinalizador luminoso Fornecida com espelho central Branco
		Ligadores automáticos
10	7759 20	 2P+T tipo "Schuko"

Emb.	Ref.	Tomadas Monobloco 2P+T tipo "Schuko"
		Mecanismos com suporte metálico, permitem fixação por garras ou por parafuso Com índice de protecção IP 2X
		Ligadores de parafuso Fornecidas completas (uma única referência)
10	7710 39	 Tomada monobloco Branco
10	7712 39	 Tomada monobloco Dark Bronze
10	7713 39	 Tomada monobloco Soft Alumínio
10	7714 39	 Tomada monobloco Titânio
10	7715 39	 Tomada monobloco Pérola
		Ligadores automáticos Fornecidas completas (uma única referência)
10	7710 40	 Tomada monobloco Branco
10	7712 40	 Tomada monobloco Dark Bronze
10	7713 40	 Tomada monobloco Soft Alumínio
10	7714 40	 Tomada monobloco Titânio
10	7715 40	 Tomada monobloco Pérola

Aparelhagem de Comando e Tomadas Plexo/ Plexo Swithes and Sockets

Relax IP 55 - IK 07
 and flush mounting, supplied complete

NEW



Mechanisms supplied complete, with back box and 2 membrane glands.
 Illuminated functions supplied with 230 V~ lamps.
 Lamps and accessories (p. 06). Automatic connection

Switches 10 AX - 250 V~

Pack	Cat.Nos	IP 55 - IK 07
10	Grey 697 09 697 16	 Two-way switch
5		 Intermediate switch
10	697 12	 Two-way switch with indicator
5	697 13	 Illuminated two-way switch
10	697 15	 Two-gang two-way switch

Push-buttons 10 A

Pack	Cat.Nos	IP 55 - IK 07
1	Grey 697 19	 N/O contact
10	697 21	 Illuminated N/O contact

Movement detectors

Pack	Cat.Nos	IP 55
1	Grey 697 40	Allows control of a lighting device as soon as the movement is detected Maximum load: - 2 000 W for incandescent and halogen lamps 230 V~, and - 2 000 W for ELV halogen lamps, - 1 000 VA for fluorescent tubes and compact fluorescent lamps Detection range from 0 to 12 m Coverage pattern adjustable during installation process Temporization between 12 s and 16 min. Dim. 90x90x85 mm  Detection angle : 360°

Key switches 10 A - 250 V~

Pack	Cat.Nos	IP 20 - IK 07
1	Grey 697 06	 Key switch for European standard lock 1 pole, switch/push button 3 positions "1-0-2" To be equipped with lock: Cat.No 696 95 below
1	697 95	 European standard lock Supplied with one set of 3 keys

Cable outlet

Pack	Cat.Nos	IP 55 - IK 07
5	Grey 697 45	 Cable outlet supplied with cable grip

Socket outlets

Pack	Cat.Nos	German standard 16 A - 250 V~
10	Grey 697 33	 2P + E with earth lateral contact with screw terminals
5	69672SSO	 2P+E switched socket outlet, 16A switch and 13A socket
10	697 32	 2P+E screw terminals
5	697 39	 2 x 2P+E screw terminals
10	697 31	 2P + E with shutters for child protection, automatic terminals

Switches 10 AX - 250 V~

Pack	Cat.Nos	IP 55 - IK 07
10	Grey 698 11	 Two-way switch

Push-buttons 10 A

Pack	Cat.Nos	IP 55 - IK 07
10	Grey 698 21	 Illuminated changeover push-button (N/O + N/C contact)
5	698 24	 Illuminated changeover push-button (N/O + N/C contact), with label holder Supplied with 12 V lamp Can be equipped with 230 V~ lamp

Tomadas Industriais/ Industrial Sockets



P17 Tempra Pro IP 44 - 16 e 32 A

tabela de escolha

Conforme as normas IEC 60309-1 e IEC 60309-2 IP 44 de acordo com a norma IEC 60529 IK 09 de acordo com a norma IEC 62262 Material: poliamida 6 Auto-extinguível: 850°C (suporte das partes ativas) / 650°C (caixa plástica)			FUNÇÕES							
			TOMADAS DE SOBREPOR	TOMADAS DE EMBUTIR INCLINADAS	TOMADAS DE EMBUTIR RETAS	TOMADAS COM INTERTRAVAMENTO MECÂNICO	TOMADAS MÓVEIS	PLUGUES MÓVEIS	PLUGUES MÓVEIS CURVADOS	PLUGUES DE SOBREPOR
										
Baixa tensão										
100 a 130 V~ 50/60 Hz	16 A	2P+T	5 551 51	5 551 81	573 51		5 551 01	5 551 21		575 81 ⁽²⁾
		3P+T	5 551 52				5 551 02	5 551 22		
	32 A	2P+T	5 552 51	5 552 81			5 552 11	5 552 31		582 81 ⁽²⁾
200 a 250 V~ 50/60 Hz	16 A	2P+T	5 551 54	5 551 84	573 54	573 00 ⁽¹⁾	5 551 04	5 551 24	564 53	575 84 ⁽²⁾
		3P+T	5 551 55	5 551 85			5 551 05	5 551 25		575 85 ⁽²⁾
		3P+N+T	5 551 56	5 551 86			5 551 06	5 551 26		575 86 ⁽²⁾
	32 A	2P+T	5 552 54	5 552 84	580 54		5 552 14	5 552 34	564 73	582 84 ⁽²⁾
		3P+T	5 552 55	5 552 85			5 552 15	5 552 35		
		3P+N+T	5 552 56	5 552 86			5 552 16	5 552 36		582 86 ⁽²⁾
380 a 415 V~ 50/60 Hz	16 A	2P+T	5 551 57				5 551 07	5 551 27		
		3P+T	5 551 58	5 551 88	573 58	573 01 ⁽¹⁾	5 551 08	5 551 28	564 57	575 88 ⁽²⁾
		3P+N+T	5 551 59	5 551 89	573 59	573 02 ⁽¹⁾	5 551 09	5 551 29	564 58	575 89 ⁽²⁾
	32 A	2P+T	5 552 57				5 552 17	5 552 37		
		3P+T	5 552 58	5 552 88	580 58		5 552 18	5 552 38	564 77	582 88 ⁽²⁾
		3P+N+T	5 552 59	5 552 89	580 59		5 552 19	5 552 39	564 78	582 89 ⁽²⁾
440 a 460 V~ 50/60 Hz	16 A	3P+T	5 551 60	5 551 90			5 551 10	5 551 30		
	32 A	3P+T	5 552 60	5 552 90			5 552 20	5 552 40		
480 a 500 V~ 50/60 Hz	16 A	3P+T	5 551 62	5 551 92			5 551 12	5 551 32		
		3P+N+T	5 551 63	5 551 93			5 551 13	5 551 33		
	32 A	3P+T	5 552 62	5 552 92			5 552 22	5 552 42		
		3P+N+T	5 552 63	5 552 93			5 552 23	5 552 43		

1: Pode ser instalada em placas frontais ref. 577 23 (pág. 20) - 2: Não acompanha tampas de proteção (pág. 12)

P17 Tempra Pro IP 66/67 - 16, 32, 63 e 125 A

tabela de escolha

		FUNÇÕES						
		TOMADAS DE SOBREPOR	TOMADAS DE EMBUTIR	TOMADAS COM INTERTRAVAMENTO MECÂNICO	TOMADAS MÓVEIS	PLUGUES MÓVEIS	PLUGUES MÓVEIS CURVADOS	PLUGUES DE SOBREPOR
Conforme as normas IEC 60309-1 e IEC 60309-2 IP 44 de acordo com a norma IEC 60529 IK 09 de acordo com a norma IEC 62262 Material: poliamida 6 Auto-extinguível: 850°C (suporte das partes ativas) / 650°C (caixa plástica)								
Baixa tensão								
100 a 130 V~ 50/60 Hz	16 A	2P+T	5 553 51	5 553 81		5 553 01	5 553 21	568 00
	32 A	2P+T	5 554 51	5 554 81		5 554 31		
200 a 250 V~ 50/60 Hz	16 A	2P+T	5 553 54	5 553 84	573 20 ⁽¹⁾⁽²⁾	5 553 04	5 553 24	565 03
		3P+T	5 553 55	5 553 85		5 553 05	5 553 25	568 04
		3P+N+T	5 553 56	5 553 86		5 553 06	5 553 26	
	32 A	2P+T	5 554 54	5 554 84		5 554 14	5 554 34	565 23
		3P+T	5 554 55	5 554 85		5 554 15	5 554 35	
		3P+N+T	5 554 56	5 554 86		5 554 16	5 554 36	
	63 A	2P+T	587 40	587 20		587 10	587 00	587 30
		3P+T	587 41	587 21		587 11	587 01	
		3P+N+T	587 42	587 22		587 12	587 02	
380 a 415 V~ 50/60 Hz	16 A	3P+T	5 553 58	5 553 88	573 21 ⁽¹⁾⁽²⁾	5 553 08	5 553 28	568 07
		3P+N+T	5 553 59	5 553 89	573 22 ⁽¹⁾⁽²⁾	5 553 09	5 553 29	568 08
	32 A	3P+T	5 554 58	5 554 88		5 554 18	5 554 38	568 27
		3P+N+T	5 554 59	5 554 89		5 554 19	5 554 39	565 28
	63 A	3P+T	587 44	587 24		587 14	587 04	587 34
		3P+N+T	587 45	587 25		587 15	587 05	587 35
	125 A	3P+T	591 06	591 16		591 36	591 26	591 46
		3P+N+T	591 07	591 17		591 37	591 27	591 47
	32 A	3P+T		5 554 91		5 554 21	5 554 41	
440 V~ 50/60 Hz para containers	16 A	3P+T	5 553 62	5 553 92		5 553 12	5 553 32	
		3P+T	5 554 62	5 554 92		5 554 22	5 554 42	
	32 A	3P+N+T	5 554 63				5 554 43	
		3P+T	553 48	587 27		587 17	587 07	
480 a 500 V~ 50/60 Hz	16 A	3P+T	5 553 62	5 553 92		5 553 12	5 553 32	
		3P+T	5 554 62	5 554 92		5 554 22	5 554 42	
	32 A	3P+N+T	5 554 63				5 554 43	
480 a 500 V~ 50/60 Hz	63 A	3P+T	553 48	587 27		587 17	587 07	
		3P+T	553 48	587 27		587 17	587 07	

1: IP 55 - 2: Pode ser instalada somente com placas frontais ref 577 23 (pág. 20)

Quadro de Tomadas/ Sockets Switchboard



577 04 com botão de emergência, tomadas e plugue de sobrepôr



577 20 com tomadas com intertravamento

TOMADAS DE EMBUTIR

(pág. 17)		IP 44	
20/25 V~	16 A 2P	552 45	
	32 A 2P	552 95	
(pág. 14 à 19)		IP 44	IP 66-67
100/130 V~	16 A 2P+T	5 551 81	-
	16 A 2P+T	5 551 84	5 553 84
	32 A 2P+T	5 552 84	5 554 84
	63 A 2P+T	-	587 20
	16 A 3P+T	5 551 88	5 553 88
	16 A 3P+N+T	5 551 89	5 553 89
	32 A 3P+T	5 552 88	5 554 88
	32 A 3P+N+T	5 552 89	5 554 89
	63 A 3P+T	-	587 24
	63 A 3P+N+T	-	587 25

Combinações possíveis de tomadas para placas frontais de 220 x 125 mm

Ref.	Número de tomadas	Corrente			Número de placas frontais		
		16 A	16 A ou 32 A	63 A	577 12	577 13	577 17
Com caixa ou base							
577 10 ou 589 38	1 tomada	-	1	-	1	-	-
	2 tomadas	2	-	-	-	1	-
577 05		-	2	-	2	-	-
	2 tomadas	-	1	1	1	-	1
		-	-	2	-	-	2
		3	-	-	1	1	-
	3 tomadas	2	1	-	1	1	-
		2	-	1	-	1	1
	4 tomadas	4	-	-	-	2	-
		-	3	-	3	-	-
577 06	3 tomadas	-	-	3	-	-	3
		-	1	2	1	-	2
		-	2	1	2	-	1
		2	1	1	1	1	1
	4 tomadas	2	2	-	2	1	-
		2	-	2	-	1	2
		4	1	-	1	2	-
	5 tomadas	4	-	1	-	2	1
		6	-	-	-	3	-
		-	-	-	-	-	-

TOMADAS DE EMBUTIR

(pág. 17)		IP 44	
20/25 V~	16 A 2P	552 45	
	32 A 2P	552 95	
(pág. 14 à 19)		IP 44	IP 66-67
100/130 V~	16 A 2P+T	5 551 81	-
	16 A 2P+T	5 551 84	5 553 84
	32 A 2P+T	5 552 84	5 554 84
	63 A 2P+T	-	587 20
	16 A 3P+T	5 551 88	5 553 88
	16 A 3P+N+T	5 551 89	5 553 89
	32 A 3P+T	5 552 88	5 554 88
	32 A 3P+N+T	5 552 89	5 554 89
	63 A 3P+T	-	587 24
	63 A 3P+N+T	-	587 25

Combinações possíveis de tomadas para placas frontais de 280 x 125 mm

Ref.	Número de tomadas	Corrente			Número de placas frontais			
		16 A	16 A ou 32 A	63 A	577 18	577 23	577 19	577 14
Com caixa ou base								
577 11 ou 577 20	2 tomadas	-	2	-	1	-	-	-
	2 tomadas	-	1	1	-	-	1	-
	2 tomadas supercompactas	-	-	-	-	1	-	-
	3 tomadas	3	-	-	-	-	-	1
577 03	4 tomadas	-	4	-	2	-	-	-
	4 tomadas	-	2	2	-	-	2	-
	4 tomadas	-	3	1	1	-	1	-
	4 tomadas supercompactas	-	-	-	-	2	-	-
	5 tomadas	3	1	1	-	-	1	1
	6 tomadas	3	2	-	1	-	-	1
577 04	6 tomadas	6	-	-	-	-	-	2
	6 tomadas	-	6	-	3	-	-	-
	6 tomadas	-	3	3	-	-	3	-
	6 tomadas	-	5	1	2	-	1	-
	6 tomadas	-	4	2	1	-	2	-
	6 tomadas supercompactas	-	-	-	-	3	-	-
	7 tomadas	3	2	2	-	-	2	1
	7 tomadas	3	4	-	2	-	-	1
	8 tomadas	6	1	1	-	-	1	1
	8 tomadas	6	2	-	1	-	-	2
9 tomadas	9	-	-	-	-	-	2	

Metal floor boxes for all installations in SABS & BS standards Pop Out Floor Boxes



6503 00 + 741 20
3 Mosaic Module



650349 + Mosaic
6 Mosaic Module

Pack Cat.No Flush mount floor box for concrete floors IP 40 - for 3 Mosaic modules

- Aluminium frame with L,N,E connecting block
Tube entries Ø 20 mm and Ø 25 mm
120 x 120 mm frame
- | | | |
|---|----------------|-----------------------------|
| 1 | 6503 00 | 3 module floor box - silver |
| 1 | 6503 90 | PVC back box 3m for 6503 00 |

6 Mosaic modules floor boxes

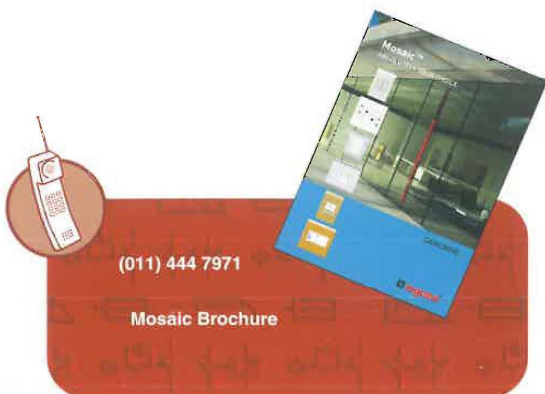
- | | | |
|---|----------------|---------------------------------|
| 1 | 6503 49 | 2 x 3 module floor box - silver |
| 1 | 6503 31 | PVC back box 2 x 3m for 650349 |

Floor box



CFB3EC - complete

- | Pack | Cat. Nos | |
|------|-----------------|---|
| 1 | CFB3EC | Floor box 80mm deep with plastic trim |
| 1 | CFB6MOD | 6 module plates for Mosaic mechanisms |
| 1 | CFBBLANK | Blank plate |
| 5 | 741 20 | Mosaic switched socket 2P+E 3 mod |
| 5 | 741 21 | Mosaic dedicated switched socket 2P+E 3 mod |
| 10 | 742 85 | Mosaic RJ45 CAT 5c |
| 10 | 743 91 | Mosaic blanking plate 1m |



(011) 444 7971

Mosaic Brochure

Batik™ floor boxes for masonry (concrete floors)



0892 96



0892 91

Pack Cat.Nos Batik™ flush-mounting floor boxes

- For mounting frames and grids for Mosaic wiring accessories supplied with installation cover
Tube entries Ø 20 and Ø 25 mm
- | | | |
|---|---------------|---|
| 1 | 892 98 | 4-gang flush-mounting box for 8 Mosaic modules height adjustable from 53 to 85 mm and up to 120 mm with accessory, Cat.No 0892 97 |
| 1 | 892 99 | 8-gang flush-mounting box for 16 Mosaic modules height adjustable from 59 to 100 mm |

Frames for Batik™ floor boxes

IP 44 - IK 08

Supplied with covers and supports for Mosaic wiring accessories (the assembly is made up of a flush-mounting box and a frame)

4-gang frames

- | | | |
|---|---------------|--|
| 1 | 892 90 | For 8 Mosaic modules With cover for carpet |
| 1 | 892 91 | With stainless steel cover |

8-gang frames

- | | | |
|---|---------------|---|
| 1 | 892 92 | For 16 Mosaic modules possible to mount 2 additional RJ 45 1-gang, fitted with 2 transparent label-holders per grid With cover for carpet |
| 1 | 892 93 | With stainless steel cover |

Batik™ floor boxes for raised floors



0893 00
fitted with Mosaic mechanisms

Pack Cat.Nos Batik floor boxes for false floors IP 24 - 5

For 8 Mosaic modules

- Supplied with 2 supports for equipment, 4 membrane gland cable entries and 4 cord grips
Cut-out dimensions: 170 x 255 mm
Frame dimensions: 185 x 270 mm
- | | | |
|---|---------------|----------------------------|
| 1 | 893 00 | With cover for carpet |
| 1 | 893 01 | With stainless steel cover |

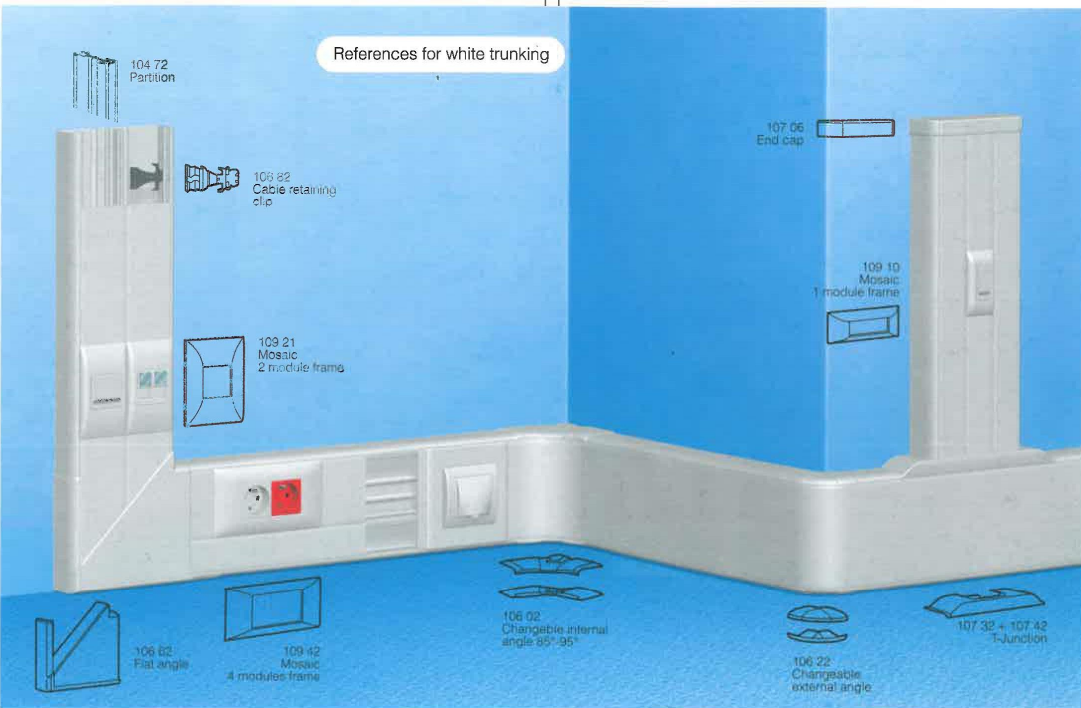
IP 24 - 5

- For 16 Mosaic modules
Supplied with 4 supports for equipment, 8 membrane gland cable entries and 8 cord grips
Cut-out dimensions: 290 x 255 mm
Frame dimensions: 305 x 270 mm
- | | | |
|---|---------------|----------------------------|
| 1 | 893 02 | With cover for carpet |
| 1 | 893 03 | With stainless steel cover |

Bold numbers - Stock items

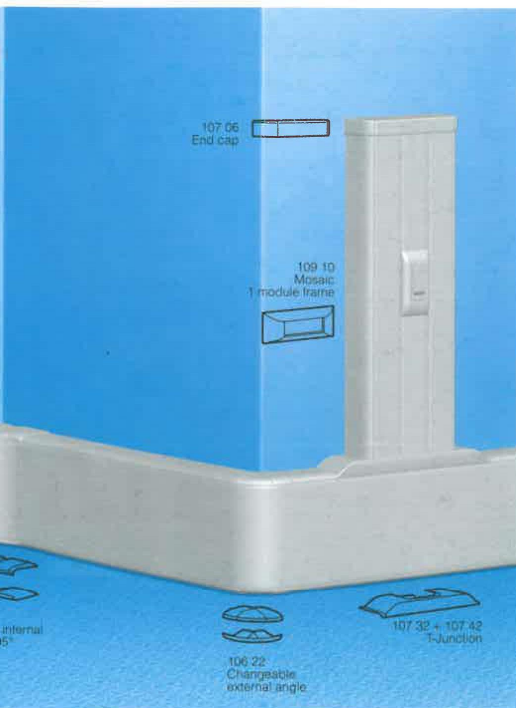


150 x 50 mm DLP adaptable trunking grey and white



References for white trunking

150 x 50 mm DLP adaptable trunking grey and white



Pack **Cat.Nos**

	Length 2 m White	Length 2 m Grey	
10 ⁽¹⁾	104 32	6104 32	Supplied without covers 150x 50 mm cross section

Rigid Covers

	White	Grey	
24 ⁽¹⁾	105 00	6105 00	40mm width
24 ⁽¹⁾	105 01	6105 01	65mm width
32 ⁽¹⁾	105 02	6105 02	85mm width
20 ⁽¹⁾	105 04	6105 04	130mm width

Flexible Covers

	White	Grey	
20 ⁽¹⁾	105 20	6105 20	40mm width
20 ⁽¹⁾	105 21	6105 21	65mm width
20 ⁽¹⁾	105 22	6105 22	85mm width
8 ⁽¹⁾	105 24	6105 24	130mm width

Partitions

	White	Grey	
24 ⁽¹⁾	104 72	6104 72	Compartment partition
48 ⁽¹⁾	105 82	6105 82	Internal divider

DL DUCT adaptors

5	107 74 + 106 90	White DLP floor duct adaptor with cover
5	6107 74 + 6106 90	Grey DLP floor duct adaptor with cover

Cable retention accessories

14	106 82	Staple for cables retention
100	308 81	Base for cable ties in trunking

Pack **Cat.Nos**

	White	Grey	
10	107 06	6107 06	End cap left or right
10	106 02	6106 02	Changeable internal angle 85°-95°
10	106 12	6106 12	Changeable internal angle divider 85°-95°
10	106 13	6106 13	Changeable internal angle 60°-85°
5	106 12	6106 12	Changeable internal angle divider 60°-85°
10	106 14	6106 14	Changeable internal angle 95°-120°
5	106 11	6106 11	Changeable internal angle divider 95°-120°
10	106 22	6106 22	Changeable external angle 60°-120°
5	106 32	6106 32	Changeable external angle divider 60°-120°
10	106 62	6106 62	Changeable flat angle 90° ± 5%
10	107 32	6107 32	T-Junction
5	107 42	6107 42	T-Junction divider
20	106 92	6106 92	Joint cover for body
10	108 00	6108 00	Joint cover for 40mm front cover
10	108 01	6108 01	Joint cover for 65mm front cover
10	108 02	6108 02	Joint cover for 85mm front cover
10	107 61	6107 61	DLP 3D adaptor

Mosaic installation frames

	White	Grey	
5	109 10	6109 10	1 module for 40 mm cover
20	109 21	6109 21	2 module for 65 mm cover
20	109 22	6109 22	2 module for 85 mm cover
20	109 31	6109 31	3 module for 65 mm cover
20	109 32	6109 32	3 module for 85 mm cover
20	109 41	6109 41	4 module for 65 mm cover
20	109 42	6109 42	4 module for 85 mm cover
10	109 61	6109 61	6 module for 65 mm cover
10	109 62	6109 62	6 module for 85 mm cover

Installation accessories

10	109 27	2 module insulation box
10	109 37	3 module insulation box

Lexic installation frames

	White	Grey	
5	109 25	6109 25	2 module for 65 mm cover
5	109 35	6109 35	3 module for 85 mm cover

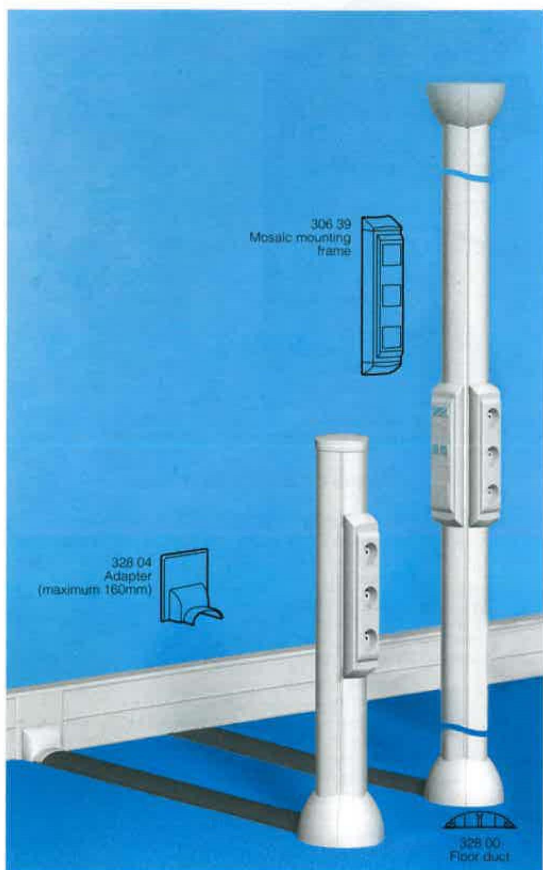
(1) Number of metres per pack

Bold numbers - Stock items



DL POLE

DLP aluminium distribution columns semi-columns, mini-columns



Pack Cat.Nos **Columns and semi-columns**
Composed of:
• aluminium body
• telescopic ceiling mounting device
• two protective end caps
• white PVC covers



mini-columns
• base plate and end cap

**Columns
4 compartments**

1 **307 03** Length 2,70 m
1 **307 07** Length 3,90 m

**Semi-columns
2 compartments**

1 **307 35** Length 2,70 m
1 **307 36** Length 3,90 m

**Mini-columns
4 compartments**

1 **307 42** Length 0,70 m

Mounting frame

1 **306 39** 6 module Mosaic mounting frame for all poles
1 **306 37** 3 module Mosaic mounting frame

	Maximum length to false ceiling	Maximum length to ceiling
307 03 307 35	2,70 m	3,80 m
307 07 307 36	3,90 m	5,00 m



DL DUCT

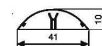
floor duct



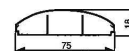
Pack Cat.Nos **Floor duct**

For protection of power and data cables on floors between desks, machines etc. Also used for supply of cables to columns and mini columns.
Supplied with cover

54⁽¹⁾ **300 92** 41 x 10 mm cross section
2 compartments / 2m length



36⁽¹⁾ **300 93** 75 x 18 mm cross section
3 compartments / 2m length



20⁽¹⁾ **328 00** 92 x 20 mm cross section
4 compartments / 2m length



①: maxi Ø 14,5 mm
②: maxi Ø 9 mm

Accessories for 0328 00 floor duct

5 **328 01** 4-direction junction box
5 **328 02** Flat angle
10 **328 03** Cover joint
1 **328 04** Adapter to DLP trunking up to 160mm
10 **328 07** End cap

(1) Number of metres per pack

Bold numbers - Stock items

TruVision® IP Products

IP Cameras

TruVision IP cameras not only deliver superior image quality, but also perform seamlessly with a variety of video management software and recorders. Our interactive IP/VMS Compatibility tool makes it easy to determine the ideal camera option for specific applications.



IP Open Standards Outdoor IR Wedge Dome Cameras



- Compact design provides discreet video surveillance
- Durable, IP66 vandal-resistant housings provide an added layer of protection
- VGA, 1.3MPx and 3MPx resolution options deliver sharp image quality for a variety of indoor and outdoor applications

Certain features available only on select models.

IP Open Standards IR Wedge Dome Cameras Comparison Table

	TVW-3101	TVW-3102
Description	1.3MPx Wedge	3MPx Wedge
Sensor	1/3" Progressive Scan CMOS	1/3" Progressive Scan CMOS
Resolution	1.3MPx	3MPx
Compression	H.264/MJPEG	H.264/MJPEG
Day/Night	True D/N	True D/N
Sensitivity	0.01 Lux	0.01 Lux
IR Distance	IR 33ft	IR 33ft
Lens	2.8mm fixed lens	2.8mm fixed lens
Misc.	DWDR, Supports up to 64GB Micro SD, Adapt plate included; Wall, Pendant, Gooseneck mounting available	DWDR, Supports up to 64GB Micro SD, Adapt plate included; Wall, Pendant, Gooseneck mounting available
Voltage	PoE/12VDC	PoE/12VDC
Motion Detection	Yes	Yes
Privacy Masking	Yes	Yes
Operating Temp	-30°C~60°C	-30°C~60°C
Environmental Rating	Outdoor IP66/IK-08	Outdoor IP66/IK-08
Warranty	3 Year	3 Year



Complete systems built on compatible performance

TruVision cameras are not only designed to deliver superior image quality, but also to perform seamlessly with a variety of video management software and recorders for optimal security and performance. Our interactive IP/VMS Compatibility tool makes it easy to determine the ideal camera option for specific applications.

http://interlogix.com/_/demos/ip-vms-tool/

TruVision® IP Products



IP Open Standards Outdoor Bullet Cameras



- True day/night functionality and infrared illuminators capture detailed images in challenging lighting scenarios
- Resolutions ranging from VGA to 5MPx can support almost any surveillance need
- IP66 weather-resistant enclosures offer added durability for outdoor applications

IP Open Standards Outdoor Bullet Cameras Comparison Table

	TVB-3101	TVB-3102	TVG-N225E-2M-N	TVG-M1245E-2M-N	TVG-M3245E-2M-N	TVG-M5225E-3M-N
Description	1.3MPx Bullet	3MPx Bullet	VGA Bullet	1.3MPx Bullet	3MPx Bullet	5MPx Bullet
Sensor	1/3" Progressive Scan CMOS	1/3" Progressive Scan CMOS	1/4" WDR Prog Scan CMOS	1/3" WDR Prog Scan CMOS	1/3" WDR Prog Scan CMOS	1/2.5" WDR Prog Scan CMOS
Resolution	1.3MPx	3MPx	VGA	1.3MPx	3MPx	5MPx
Compression	H.264/MJPEG	H.264/MJPEG	H.264, MPEG-4, MJPEG	H.264, MPEG-4, MJPEG	H.264, MPEG-4, MJPEG	H.264, MPEG-4, MJPEG
Day/Night	True D/N	True D/N	True D/N	True D/N	True D/N	True D/N
Sensitivity	0.01 Lux	0.01 Lux	0.01 Lux	0.01 Lux	0.01 Lux	0.60 Lux
IR Distance	25M	25M	25M	25M	25M	25M
Lens	6mm fixed lens	6mm fixed lens	2.8-12mm/F1.2 AF	2.7-9mm/F1.6 AF	2.7-9mm/F1.6 AF	3.5-9mm/F1.6 AF
Misc.	DWDR, Cable Management Bracketing	DWDR, Cable Management Bracketing	Digital Zoom, Digital Focus, Motion, Tampering	Digital Zoom, Digital Focus, Motion, Tampering	Digital Zoom, Digital Focus, Motion, Tampering	Digital Zoom, Digital Focus, Motion, Tampering
Voltage	PoE/12VDC	PoE/12VDC	PoE/12VDC	PoE/12VDC	PoE/12VDC	PoE/12VDC
Motion Detection	Yes	Yes	Yes	Yes	Yes	Yes
Privacy Masking	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temp	-30°C~60°C	-30°C~60°C	-30°C~60°C	-30°C~60°C	-30°C~60°C	-30°C~60°C
Environmental Rating	Outdoor IP66	Outdoor IP66	Outdoor IP66	Outdoor IP66	Outdoor IP66	Outdoor IP66
Warranty	3 Year	3 Year	3 Year	3 Year	3 Year	3 Year

Certain features available only on select models.



IP Open Standards Indoor/Outdoor Mini-Dome Cameras



- Resolutions ranging from VGA to 5MPx can support almost any surveillance need
- Integrated motion detection and privacy masking offer added security and convenience
- True day/night functionality and infrared illuminators capture detailed images in challenging lighting scenarios



IP Open Standards Outdoor Dome Cameras



- IP66 vandal-resistant housings provide an added layer of protection
- Integrated heater delivers reliable performance, even in low temperatures
- True day/night functionality and infrared illuminators capture detailed images in challenging lighting scenarios

IP Dome Cameras Comparison Table

	TVD-3101	TVD-3102	TVD-3103	TVD-3104	TVD-N 225E-2M-N	TVD-M 1245E-2M-N	TVD-M 3245E-2M-N	TVD-M 5225E-3M-N
Description	1.3MPx Dome	3MPx Dome	1.3MPx Dome	3MPx Dome	VGA Dome	1.3MPx Dome	3MPx Dome	5MPx Dome
Sensor	1/3" Progressive Scan CMOS	1/3" Progressive Scan CMOS	1/3" Progressive Scan CMOS	1/3" Progressive Scan CMOS	1/3" WDR Prog Scan CMOS	1/3" WDR Prog Scan CMOS	1/3" WDR Prog Scan CMOS	1/2.5" WDR Prog Scan CMOS
Resolution	1.3MPx	3MPx	1.3MPx	3MPx	VGA (640x480)	1.3MPx	3MPx	5MPx
Compression	H.264/MJPEG	H.264/MJPEG	H.264/MJPEG	H.264/MJPEG	H.264, MPEG-4, MJPEG	H.264, MPEG-4, MJPEG	H.264, MPEG-4, MJPEG	H.264, MPEG-4, MJPEG
Day/Night	Bac D/N	Bac D/N	True D/N	True D/N	True D/N	True D/N	True D/N	True D/N
Sensitivity	0.01 Lux	0.01 Lux	0.01 Lux	0.01 Lux	0.01 Lux	0.01 Lux	0.01 Lux	0.60 Lux
IR Distance	NA	NA	15M	15M	10M	10M	10M	10M
Lens	2.8mm fixed lens	2.8mm fixed lens	VF 2.8-12mm	VF 2.8-12mm	2.8-12mm/F1.2 AF	2.7-9mm/F1.6 AF	2.7-9mm/F1.6 AF	3.5-9mm/F1.6 AF
Misc.	DWDR, Light-weight housing; Wall, Pendant, Gooseneck mounting available	DWDR, Light-weight housing; Wall, Pendant, Gooseneck mounting available	DWDR, Supports up to 64GB Micro SD, Bi-Directional Audio, Light-weight housing; Wall, Pendant, Gooseneck mounting available	DWDR, Supports up to 64GB Micro SD, Bi-Directional Audio, Light-weight housing; Wall, Pendant, Gooseneck mounting available	Digital Zoom, Digital Focus, Motion, Tampering, Supports up to 32GB SD Storage	Digital Zoom, Digital Focus, Motion, Tampering, Supports up to 32GB SD Storage	Digital Zoom, Digital Focus, Motion, Tampering, Supports up to 32GB SD Storage	Digital Zoom, Digital Focus, Motion, Tampering, Supports up to 32GB SD Storage
Voltage	PoE	PoE	PoE/12VDC	PoE/12VDC	PoE+/PoE/24VAC	PoE+/PoE/24VAC	PoE+/PoE/24VAC	PoE+/PoE/24VAC
Motion Detection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Privacy Masking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temp	-10°C~60°C	-10°C~60°C	-30°C~60°C	-30°C~60°C	-50°C~60°C	-50°C~60°C	-50°C~60°C	-50°C~60°C
Environmental Rating	Indoor	Indoor	Outdoor IP65/IK-10	Outdoor IP65/IK-10	Outdoor	Outdoor	Outdoor	Outdoor
Warranty	3 Year	3 Year	3 Year	3 Year	3 Year	3 Year	3 Year	3 Year

Certain features available only on select models.

TruVision® IP Products



IP Megapixel PTZ Dome Cameras



- Progressive-scan 1.3 and 2MPx 20X optical zoom offers clear images at both short- and long-range distances
- Digital wide dynamic range functionality enables viewing in bright and dark areas simultaneously
- User-friendly design installs quickly and easily, right out of the box



IP PTZ Dome Cameras



- Progressive-scan 36X optical (12X digital) zoom offers clear images at both short- and long-range distances
- Wide dynamic range functionality enables viewing in bright and dark areas simultaneously
- Built-in H.264 video encoder for 4CIF resolution at 30fps over an IP network

IP PTZ Dome Cameras Comparison Table

	TVP-3101	TVP-3102	TVP-3103	TVP-3104	TVP-3105	TVP-3106	UVP-N120P-36X-N	UVP-N120S-36X-N	UVP-N120F-36X-N
Description	1.3MPx PTZ Pendant	1.3MPx PTZ Surface	1.3MPx PTZ Flush	2MPx PTZ Pendant	2MPx PTZ Surface	2MPx PTZ Flush	36x IP PTZ Pendant	36x IP PTZ Surface	36x IP PTZ Flush
Sensor	1/3" Prog Scan CMOS	1/3" Prog Scan CMOS	1/3" Prog Scan CMOS	1/3" Prog Scan CMOS	1/3" Prog Scan CMOS	1/3" Prog Scan CMOS	1/4" CCD	1/4" CCD	1/4" CCD
Resolution	1.3MPx	1.3MPx	1.3MPx	2MPx	2MPx	2MPx	4CIF 704x480	4CIF 704x480	4CIF 704x480
Compression	H264, MPEG-4, MJPEG	H264, MPEG-4, MJPEG	H264, MPEG-4, MJPEG	H264, MPEG-4, MJPEG	H264, MPEG-4, MJPEG	H264, MPEG-4, MJPEG	H264	H264	H264
Day/Night	True D/N	True D/N	True D/N	True D/N	True D/N	True D/N	True D/N	True D/N	True D/N
Color Sensitivity	0.05 Lux	0.05 Lux	0.05 Lux	0.05 Lux	0.05 Lux	0.05 Lux	0.01 Lux	0.01 Lux	0.01 Lux
B/W Sensitivity	0.05 Lux	0.05 Lux	0.05 Lux	0.05 Lux	0.05 Lux	0.05 Lux	0.01 Lux	0.01 Lux	0.01 Lux
Zoom	20X (4.3-86mm)	20X (4.3-86mm)	20X (4.3-86mm)	20X (4.3-86mm)	20X (4.3-86mm)	20X (4.3-86mm)	36x (3.4-122mm)	36x (3.4-122mm)	36x (3.4-122mm)
Misc.	DWDR, Intelligent Tracking, Compatible with Legacy mounting	DWDR, Intelligent Tracking, Compatible with Legacy mounting	DWDR, Intelligent Tracking, Compatible with Legacy mounting	DWDR, Intelligent Tracking, Compatible with Legacy mounting	DWDR, Intelligent Tracking, Compatible with Legacy mounting	DWDR, Intelligent Tracking, Compatible with Legacy mounting	WDR, 540deg/sec pan, 400deg/sec tilt, 360 endless pan travel	WDR, 540deg/sec pan, 400deg/sec tilt, 360 endless pan travel	WDR, 540deg/sec pan, 400deg/sec tilt, 360 endless pan travel
Voltage	PoE+/PoE/24VAC	PoE+/PoE/24VAC	PoE+/PoE/24VAC	PoE+/PoE/24VAC	PoE+/PoE/24VAC	PoE+/PoE/24VAC	24VAC	24VAC	24VAC
Motion Detection	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Privacy Masking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Operating Temp	-30°C~65°C (PoE+) -40°C~65°C (24VAC)	-10°C~60°C	-10°C~60°C	-30°C~65°C (PoE+) -40°C~65°C (24VAC)	-10°C~60°C	-10°C~60°C	-30°C~65°C	-10°C~60°C	-10°C~60°C
Environmental Rating	Outdoor IP66, IK10	Indoor IP54	Indoor IP54	Outdoor IP66, IK10	Indoor IP54	Indoor IP54	Outdoor IP66	Indoor IP54	Indoor IP54
Warranty	2 Year	2 Year	2 Year	2 Year	2 Year	2 Year	2 Year	2 Year	2 Year

Certain features available only on select models.



IP Open Standards Box Cameras



- Resolutions ranging from standard to 5MPx can support almost any surveillance need
- Real-time video streaming with up to 1080p resolution delivers exceptionally detailed images (select models)
- H.264 compression with dual-streaming functionality accommodates multiple settings



TVE Series Encoders



- 4-, 8- and 16-channel options transform analog camera signals to H.264 compressed IP signals
- Allow viable analog cameras to be integrated into IP-based systems
- Adhere to PSIA/ONVIF/CGI open communication standards

IP Products Ordering Information

IP OPEN STANDARDS OUTDOOR IR WEDGE DOME CAMERAS	
TIW-S101	ThiVision 1.3MPx, NTSC, Outdoor IR Wedge Dome, True D/N, H.264, PSIA/ONVIF/CGI, 10m IR, 2.8mm Ø F2.0, PoE/12VDC
TIW-S102	ThiVision 3MPx, NTSC, Outdoor IR Wedge Dome, True D/N, H.264, PSIA/ONVIF/CGI, 10m IR, 2.8mm Ø F2.0, PoE/12VDC
IP OPEN STANDARDS OUTDOOR BULLET CAMERAS	
NTSC	
TVB-S101	ThiVision® 1.3MPx, NTSC, Outdoor IR Mini Bullet, True D/N, H.264, PSIA/ONVIF/CGI, 25m IR, 8mm Ø F2.0, PoE/12VDC
TVB-S102	ThiVision 3MPx, NTSC, Outdoor IR Mini Bullet, True D/N, H.264, PSIA/ONVIF/CGI, 25m IR, 8mm Ø F2.0, PoE/12VDC
TWC-H225E-2M-H	ThiVision VGA Open STD, Progressive Scan CMOS Outdoor Bullet, True D/N, 2.8-12mm Motorized AI, IR LED, ONVIF/PSIA, NTSC Frame Rate, PoE/12VDC
TWC-M1245E-2M-H	ThiVision 1.3MPx WDR IP Open STD, Progressive Scan CMOS Outdoor Bullet, True D/N, 2.7-9mm Motorized AI, IR LED, ONVIF/PSIA, NTSC Frame Rate, PoE/12VDC
TWC-M3245E-2M-H	ThiVision 3MPx WDR IP Open STD, Progressive Scan CMOS Outdoor Bullet, True D/N, 2.7-9mm Motorized AI, IR LED, ONVIF/PSIA, NTSC Frame Rate, PoE/12VDC
TWC-M5225E-3M-H	ThiVision 5MPx IP Open STD, Progressive Scan CMOS Outdoor Bullet, True D/N, 3.5-9mm Motorized AI, IR LED, ONVIF/PSIA, NTSC Frame Rate, PoE/12VDC

IP OPEN STANDARDS OUTDOOR BULLET CAMERAS CONT.	
PAL	
TWC-H225E-2M-P	ThiVision VGA IP Open STD, Progressive Scan CMOS Outdoor Bullet, True D/N, 2.8-12mm Motorized AI, IR LED, ONVIF/PSIA, PAL Frame Rate, PoE/12VDC
TWC-M1245E-2M-P	ThiVision 1.3MPx WDR IP Open STD, Progressive Scan CMOS Outdoor Bullet, True D/N, 2.7-9mm Motorized AI, IR LED, ONVIF/PSIA, PAL Frame Rate, PoE/12VDC
TWC-M3245E-2M-P	ThiVision 3MPx WDR IP Open STD, Progressive Scan CMOS Outdoor Bullet, True D/N, 2.7-9mm Motorized AI, IR LED, ONVIF/PSIA, PAL Frame Rate, PoE/12VDC
TWC-M5225E-3M-P	ThiVision 5MPx IP Open STD, Progressive Scan CMOS Outdoor Bullet, True D/N, 3.5-9mm Motorized AI, IR LED, ONVIF/PSIA, PAL Frame Rate, PoE/12VDC

Certain features available only on select models.

TruVision® IP Products

IP DOME CAMERAS

NTSC

TVD-3101	TruVision 1.3MPx, NTSC, Indoor Mini-dome, Digital D/N, H.264, PSIA/ONVIF/CGI, 2.8mm Ø F2.0, PoE
TVD-3102	TruVision 3MPx, NTSC, Indoor Mini-dome, Digital D/N, H.264, PSIA/ONVIF/CGI, 2.8mm Ø F2.0, PoE
TVD-3103	TruVision 1.3MPx, NTSC, Outdoor IR Mini-dome, True D/N, H.264, PSIA/ONVIF/CGI, 15m IR, 2.8 to 12mm Ø F1.4, PoE/12VDC
TVD-3104	TruVision 3MPx, NTSC, Outdoor IR Mini-dome, True D/N, H.264, PSIA/ONVIF/CGI, 15m IR, 2.8 to 12mm Ø F1.4, PoE/12VDC
TVD-H225E-2M-H	TruVision VGA IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True D/N, 2.8-12mm Motorized AI, IR LED, ONVIF/PSIA, NTSC Out, PoE/PoE+/24VAC, Micro SD Card Slot, Heater
TVD-M1245E-2M-H	TruVision 1.3MPx WDR IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True D/N, 2.7-9mm Motorized AI, IR LED, ONVIF/PSIA, NTSC Out, PoE/PoE+/24VAC, Micro SD Card Slot, Heater
TVD-M3245E-2M-H	TruVision 3MPx WDR IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True D/N, 2.7-9mm Motorized AI, IR LED, ONVIF/PSIA, NTSC Out, PoE/PoE+/24VAC, Micro SD Card Slot, Heater
TVD-M5225E-3M-H	TruVision 5MPx IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True D/N, 3.5-9mm Motorized AI, IR LED, ONVIF/PSIA, NTSC Out, PoE/PoE+/24VAC, Micro SD Card Slot, Heater

PAL

TVD-H225E-2M-P	TruVision VGA IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True D/N, 2.8-12mm Motorized AI, IR LED, ONVIF/PSIA, PAL Out, PoE/PoE+/24VAC, Micro SD Card Slot, Heater
TVD-M1245E-2M-P	TruVision 1.3MPx WDR IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True D/N, 2.7-9mm Motorized AI, IR LED, ONVIF/PSIA, PAL Out, PoE/PoE+/24VAC, Micro SD Card Slot, Heater
TVD-M3245E-2M-P	TruVision 3MPx WDR IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True D/N, 2.7-9mm Motorized AI, IR LED, ONVIF/PSIA, PAL Out, PoE/PoE+/24VAC, Micro SD Card Slot, Heater
TVD-M5225E-3M-P	TruVision 5MPx IP Open STD, Progressive Scan CMOS Outdoor Vandal Dome, True D/N, 3.5-9mm Motorized AI, IR LED, ONVIF/PSIA, PAL Out, PoE/PoE+/24VAC, Micro SD Card Slot, Heater



IFS® Network Switches

Delivering robust electrical power and data connection to IP cameras, IFS technology is designed to meet modern network demands. These advanced network switches offer high bandwidth, isolated PoE ports, integrated SFP fiber ports and browser-based web services.

interlogix.com/transmission

IP PTZ DOME CAMERAS

NTSC

TVP-3101	TruVision 1.3MPx, NTSC, Par/Tilt/Zoom Dome Pendant Outdoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-3102	TruVision 1.3MPx, NTSC, Par/Tilt/Zoom Dome Surface Mount Indoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-3103	TruVision 1.3MPx, NTSC, Par/Tilt/Zoom Dome Flush Mount Indoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-3104	TruVision 2MPx, NTSC, Par/Tilt/Zoom Dome Pendant Outdoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-3105	TruVision 2MPx, NTSC, Par/Tilt/Zoom Dome Surface Mount Indoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-3106	TruVision 2MPx, NTSC, Par/Tilt/Zoom Dome Flush Mount Indoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
UVP-H120P-36X-H	UltraView™ IP PTZ, 36X, WDR, 4QF, Par/Tilt/Zoom Camera Indoor/Outdoor, Wall-mount ready, NTSC
UVP-H120S-36X-H	UltraView IP PTZ, 36X, WDR, 4QF, Par/Tilt/Zoom Camera Indoor Surface-mount, NTSC
UVP-H120F-36X-H	UltraView IP PTZ, 36X, WDR, 4QF, Par/Tilt/Zoom Camera Indoor, with Flush mount, NTSC

PAL

TVP-1101	TruVision 1.3MPx, PAL, Par/Tilt/Zoom Dome Pendant Outdoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-1102	TruVision 1.3MPx, PAL, Par/Tilt/Zoom Dome Surface Mount Indoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-1103	TruVision 1.3MPx, PAL, Par/Tilt/Zoom Dome Flush Mount Indoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-1104	TruVision 2MPx, PAL, Par/Tilt/Zoom Dome Pendant Outdoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-1105	TruVision 2MPx, PAL, Par/Tilt/Zoom Dome Surface Mount Indoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
TVP-1106	TruVision 2MPx, PAL, Par/Tilt/Zoom Dome Flush Mount Indoor, CMOS, True D/N, D/ADR, Motorized IR Cut Filter, H.264, ONVIF/PSIA, 20X Optical Zoom, SD Card Slot, PoE+/24VAC
UVP-H120P-36X-P	UltraView IP PTZ, 36X, WDR, 4QF, Par/Tilt/Zoom Camera Indoor/Outdoor, Wall-mount ready, PAL
UVP-H120S-36X-P	UltraView IP PTZ, 36X, WDR, 4QF, Par/Tilt/Zoom Camera Indoor Surface-mount, PAL
UVP-H120F-36X-P	UltraView IP PTZ, 36X, WDR, 4QF, Par/Tilt/Zoom Camera Indoor, with Flush mount, PAL

IP OPEN STANDARDS BOX CAMERAS

TWC-H220-1-H	TruVision VGA IP Open Standards, 1/4" CCD Traditional Box Camera, True D/N, ONVIF/PSIA, NTSC, PoE/12VDC, SDHC Card Slot
TWC-H240-1-H	TruVision 4CIF WDR IP Open Standards, 1/3" CCD Traditional Box Camera, True D/N, ONVIF/PSIA, NTSC, PoE/12VDC, SDHC Card Slot
TWC-M1220-1-H	TruVision 1.3MPx Open Standards, 1/3" Progressive Scan CCD Traditional Box Camera, True D/N, ONVIF/PSIA, NTSC, PoE/12VDC, SDHC Card Slot
TWC-M2220-1-H	TruVision 2MPx Open Standards, 1/3" Progressive Scan CMOS Traditional Box Camera, True D/N, ONVIF/PSIA, NTSC, PoE/12VDC, SDHC Card Slot
TWC-M3220-1-H	TruVision 3MPx Open Standards, 1/2.5" Progressive scan CMOS Traditional Box Camera, True D/N, ONVIF/PSIA, NTSC, PoE/12VDC, SDHC Card Slot
TWC-M5220-1-H	TruVision 5MPx Open Standards, 1/2.5" Progressive scan CMOS Traditional Box Camera, True D/N, ONVIF/PSIA, NTSC, PoE/12VDC, SDHC Card Slot

TVE SERIES ENCODERS/DECODER

TVE-400	TruVision Encoder 4-Channels Analog to IP
TVE-600	TruVision Encoder 6-Channels Analog to IP
TVE-1600	TruVision Encoder 16-Channels Analog to IP
TVE-DBC10	TruVision Decoder 1/4-Channel IP to BNC, VGA, DVI or HDMI

TruVision® IP Products

IP Network Video Recorders

For applications with multiple IP video streams, TruVision network video recorders offer flexible bandwidth allocation, user-friendly operation and convenient connectivity via a secure Web browser.



NVR 10



- Supports up to 16 HD cameras (ONVIF/PSIA) in real-time (30fps)
- Includes Continuous, Motion and Scheduled recording modes
- Up to 8 built-in PoE ports designed to support video streams from IP cameras
- Flexible bandwidth allocation per channel allows users to maximize recording performance



NVR 21



- Supports 8 to 16 HD cameras in real-time (30fps)
- Includes Continuous, Motion and Scheduled recording modes
- Provides event recording based upon native IP camera activity detection or via unit alarm input
- Start-up wizards, auto-discovery tools and ezDDNS service make configuration quick and easy



NVR 21Plus



- Supports 8/16/32 HD cameras (ONVIF/PSIA) in real time (30fps)
- High storage capacity, high bandwidth NVR
- Includes Continuous, Motion and Scheduled recording modes
- Provides event recording based upon native IP camera activity detection or via unit alarm input
- Start-up wizards, auto-discovery tools and ezDDNS service make configuration quick and easy



DVR 60 (Hybrid)



- H.264 video compression technology delivers real-time recording from up to 24 cameras
- Live-mode, dual streaming functionality provides efficient network performance
- Hybrid capability offers an easy migration from DVRs to NVRs

TruVision® IP Products

IP/Hybrid Recorders Comparison Table

Channels, Bandwidth & Resolution	NVR 10	NVR 10C	NVR 21	NVR 21Plus	DVR 60 (Hybrid)
Analog channels	N/A	N/A			16
Max. IP channels	8/16	4	16	32	16
Total Bandwidth available inward	40/80	20	40/80	40/80/160	32
Average bandwidth per channel inward	5/5	5	5	5	2
Bandwidth allocation	Fully flexible	Fully flexible	Fully flexible	Fully flexible	2 Mbps per channel max.
Real-time recording	HD	HD	HD	HD	4CIF
HD recording per channel	30 fps	30 fps	30 fps	30 fps	8 fps
Full HD recording per channel	30 fps	30 fps	12 fps	12 fps	N/A
Network & streaming					
ONVIF support	✓	✓	✓	✓	
PSIA support	✓	✓	✓	✓	
Gigabit ethernet ports	(1) GB NIC and (8) PoE Ports	(1) GB NIC and (4) PoE Ports	2	2	1
ezDDNS	✓	✓	✓	✓	
UPnP	✓	✓	✓	✓	
Maximum outgoing streams	16/16	8	64	64	48
Maximum outgoing bandwidth	80/80 Mbps	40 Mbps	80/160 Mbps	80/160 Mbps	32 Mbps
Storage					
Max storage (TB)	4/6	2	8	16	2
HDD redundancy			✓	✓	✓
eSATA support			✓	✓	✓
NAS support			✓	✓	
Auto archive	✓	✓	✓	✓	
Three record modes	✓	✓	✓	✓	
Local Viewing & Controls					
Front panel controls	✓	✓	✓	✓	✓
HDMI	✓	✓	✓	✓	
VGA	✓	✓	✓	✓	✓
BNC output			✓	✓	✓
Bidirectional audio	✓	✓	✓	✓	✓
USB slots	2	2	3	3	2
General Features					
Text insertion via ProBridge			✓	✓	✓
CD/DVD burner			via USB	via USB	✓
Reverse playback	✓	✓	✓	✓	
Rack mountable	✓		✓	✓	✓
Software Support					
TruVision Navigator	✓	✓	✓	✓	✓
TVRmobile	✓	✓	✓	✓	✓

IP/Hybrid Recorders
Ordering Information

NVR 10	
TVN-1004CS-1T	TruVision NVR 10 Compact, 4-Channels, H.264 ONVIF/PSIA, PoE Switch, 20 Mbps Bandwidth, 1TB Storage
TVN-1004CS-2T	TruVision NVR 10 Compact, 4-Channels, H.264 ONVIF/PSIA, PoE Switch, 20 Mbps Bandwidth, 2TB Storage
TVN-1008S-2T	TruVision NVR 10, 8-Channels, H.264 ONVIF/PSIA, PoE Switch, 40 Mbps Bandwidth, 2TB Storage
TVN-1008S-4T	TruVision NVR 10, 8-Channels, H.264 ONVIF/PSIA, PoE Switch, 40 Mbps Bandwidth, 4TB Storage
TVN-1016S-3T	TruVision NVR 10, 16-Channels, H.264 ONVIF/PSIA, PoE Switch, 80 Mbps Bandwidth, 3TB Storage
TVN-1016S-6T	TruVision NVR 10, 16-Channels, H.264 ONVIF/PSIA, PoE Switch, 80 Mbps Bandwidth, 6TB Storage
NVR 21	
TVN-2108-2T	TruVision NVR 21, 8-Channels, 2TB Storage
TVN-2108-4T	TruVision NVR 21, 8-Channels, 4TB Storage
TVN-2108-8T	TruVision NVR 21, 8-Channels, 8TB Storage
TVN-2116-2T	TruVision NVR 21, 16-Channels, 2TB Storage
TVN-2116-4T	TruVision NVR 21, 16-Channels, 4TB Storage
TVN-2116-8T	TruVision NVR 21, 16-Channels, 8TB Storage
NVR 21PLUS	
TVN-2108P-4T	TruVision NVR 21Plus, 8-Channels, IP H.264 ONVIF/PSIA 40Mbps Bandwidth, eSATA, 4TB Storage
TVN-2108P-8T	TruVision NVR 21Plus, 8-Channels, IP H.264 ONVIF/PSIA 40Mbps Bandwidth, eSATA, 8TB Storage
TVN-2116P-12T	TruVision NVR 21Plus, 16-Channels, IP H.264 ONVIF/PSIA, 80Mbps Bandwidth, eSATA, 12TB Storage
TVN-2116P-16T	TruVision NVR 21Plus, 16-Channels, IP H.264 ONVIF/PSIA, 80Mbps Bandwidth, eSATA, 16TB Storage
TVN-2116P-4T	TruVision NVR 21Plus, 16-Channels, IP H.264 ONVIF/PSIA, 80Mbps Bandwidth, eSATA, 4TB Storage
TVN-2116P-8T	TruVision NVR 21Plus, 16-Channels, IP H.264 ONVIF/PSIA, 80Mbps Bandwidth, eSATA, 8TB Storage
TVN-2132P-12T	TruVision NVR 21Plus, 32-Channels, IP H.264 ONVIF/PSIA, 160Mbps Bandwidth, eSATA, 12TB Storage
TVN-2132P-16T	TruVision NVR 21Plus, 32-Channels, IP H.264 ONVIF/PSIA, 160Mbps Bandwidth, eSATA, 16TB Storage
TVN-2132P-4T	TruVision NVR 21Plus, 32-Channels, IP H.264 ONVIF/PSIA, 160Mbps Bandwidth, eSATA, 4TB Storage
TVN-2132P-8T	TruVision NVR 21Plus, 32-Channels, IP H.264 ONVIF/PSIA, 160Mbps Bandwidth, eSATA, 8TB Storage
DVR 60 (Hybrid)	
TVR-6016-2T	TruVision DVR 60, H.264, 16-Channels Hybrid, DVD/CD, 2TB Storage
TVR-6016-4T	TruVision DVR 60, H.264, 16-Channels Hybrid, DVD/CD, 4TB Storage
TVR-6016-8T	TruVision DVR 60, H.264, 16-Channels Hybrid, DVD/CD, 8TB Storage
TVR-6016-12T	TruVision DVR 60, H.264, 16-Channels Hybrid, DVD/CD, 12TB Storage

TruVision® LED Monitors



LED Monitors

Engineered specifically for 24/7 operation, TruVision LED color monitors feature 3D comb filters for optimum picture quality.

- Up to 3000:1 contrast for sharp, clear images
- Multiple inputs including BNC, VGA, HDMI
- 17", 19", 21.5", 27", 32" and 42" options meet a full range of video surveillance needs

LED Monitors Comparison Table

Model	Max. Resolution	Contrast/Response Time (Tr/Tf)	Panel Lamp Life	VESA™ Mount Size
TVM-1701	17", 1280 x 1024	1000:1, 5ms	50,000	100 x 100mm
TVM-1901	19", 1280 x 1024	1000:1, 5ms	50,000	100 x 100mm
TVM-2150	21.5", 1920 x 1080	1000:1, 5ms	50,000	100 x 100mm
TVM-2700	27", 1920 x 1080	1000:1, 12ms	50,000	200(100) x 100mm
TVM-3200	32", 1920 x 1080	3000:1, 6.5ms	50,000	200(400) x 200mm
TVM-4200	42", 1920 x 1080	3000:1, 6.5ms	30,000	200(400) x 200mm

LED Monitors Ordering Information

MONITORS	
TVM-1701	TruVision LED 17" Monitor, HDMI/VGA/BNC
TVM-1901	TruVision LED 19" Monitor, HDMI/VGA/BNC
TVM-2150	TruVision LED 21.5" Full HD Monitor, HDMI/VGA/BNC
TVM-2700	TruVision LED 27" Full HD Monitor, HDMI/VGA/BNC
TVM-3200	TruVision LED 32" Full HD Monitor, HDMI/DVI/S-VIDEO/VGA/BNC
TVM-4200	TruVision LED 42" Full HD Monitor, HDMI/DVI/S-VIDEO/VGA/BNC



Ziton

Product Data Sheet

ZP755BV-3

Addressable sensor base sounder/beacon

Audible and visual warning from a single unit

The ZP755BV-3 combines sensor base, audible sounder and high intensity beacon in a single stylish moulding. It offers both audible and visual warnings from a single, addressable, loop wired unit. Providing an elegant solution for areas where the installation of separate sensor, sounder and beacon would prove expensive, both in equipment capital value and system wiring costs, the unit meets the requirements of most local disability legislation. Installation time is further reduced, as the moulding plugs directly onto a first fix base – eliminating the need for any internal connections. The ZP755BV-3 is perfectly suited for any location involving high levels of background noise.



Low current sound gun and visual element

Independent addressing for the sensor and alarm facilities is featured, with sound levels conforming to EN54 Part 3 and clear visual indication provided by a high intensity Light Emitting Diode (LED) array, positioned inside the base moulding. High efficiency acoustic design, a low energy sound gun transducer and a low current visual element, enables, up to 40 sensor sounder beacon combinations to be connected to a one kilometre loop of 1.5mm² cable, with a wiring run of 50 metres to the first device. The range features a unique self test facility - automatically activated during routine sounder testing. A built in microphone circuit measures sound output and automatically signals the sounder address and location to the control panel, should the output test fail.

External power supply option

ZP755BV-3 can be used with other ZP loop equipment in any combined application subject to maximum loop loading. In systems where loop lengths or current requirements are excessive, ZP755BV-3 can be powered directly from an external power supply. With a sound output of 90 dbA, measured at 1 metre, continuous, intermittent and two-tone audible outputs are available. The volume setting can be reduced for areas where a lower sound level is required.

Standard Features

- Sensor, sounder and beacon from a single wiring point – minimising installation costs
- Powered directly from the ZP loop
- Separate addresses selectable for sensor and sounder beacon
- Up to 40 units directly on the loop
- High efficiency sound gun transducer
- Plug in base – no internal connections
- Wide range of international sound types and frequencies



Product Data Sheet

ZP755BV-4P

ZP7 Series Addressable Base Sounder with Visual Indicator

Audible and visual warning from a single unit

The ZP755BV-4P is a POLAR WHITE, addressable loop powered base sounder with visual indicator for use on ZP fire alarm systems. The ZP755BV combines a detector base, audible sounder and high intensity visual indicator in a single stylish moulding. It offers both audible and visual warnings from a single, addressable, loop wired unit.

Providing an elegant solution for areas where the installation of a separate detector, sounder and visual indicator would prove expensive, both in equipment value and system wiring costs, the unit meets the requirements of most local legislation. Installation time is further reduced as the moulding plugs directly onto a first fix base, eliminating the need for any internal connections.

The ZP755BV is perfectly suited for any location involving high levels of background noise.

Low current sound gun and visual element

Independent addressing for the detector and alarm facilities is featured, with sound levels conforming to EN54 Part 3 and clear visual indication provided by a high intensity LED array positioned inside the base moulding.

High efficiency acoustic design, a low energy sound gun transducer and a low current visual element enables up to 30 detector and ZP755BV combinations to be connected to a 1 km loop of 1.5 mm² cable, with a wiring run of 50 m to the first device.

The range features a unique self test facility that is automatically activated during routine sounder testing. A built-in microphone circuit measures sound output and automatically signals the sounder address and location to the control panel, should the output test fail.

External power supply option

The ZP755BV may be used with other ZP loop equipment in any combined application subject to maximum loop loading. In systems where loop lengths or current requirements are excessive, the ZP755BV may be powered directly from an external power supply.

With a sound output of 90 dB(A), continuous, intermittent and two-tone audible outputs are available. The volume setting can be reduced for areas where a lower sound level is required.

Standard Features

- Detector, sounder and visual indicator from a single wiring point – minimising installation costs
- Powered directly from the ZP loop
- Separate addresses selectable for detector and notification device
- Up to 30 units directly on the loop
- High efficiency sound gun transducer
- Plug in base – no internal connections
- Wide range of international sound types and frequencies



Product Data Sheet

ZP7-SB1-P

ZP7 Series Addressable Detector Base, Surface Mounting - POLAR WHITE

General

The ZP7-SB1-P is a standard, POLAR WHITE mounting base allowing any ZP700/ZX800 series addressable detector to be removed or replaced without disconnecting loop wiring from detector terminals. The detectors plug into the base unit with a simple twist and lock action, allowing quick and easy removal for cleaning and servicing, or reselection of the device type should the usage of the protected area change.

Forming an integral part of the overall detector assembly, the ZP7-SB1-P is provided with slots for screw fixing direct to ceiling structures, to auxiliary wiring plates, or conduit boxes with screw fixing centres between 50 mm and 90 mm.

Robust wiring terminals

The ZP7-SB1-P features robust wiring terminals with captive clamping washers to ensure secure wiring termination. They are of shallow design with ample space to accommodate cables of all types. Terminals are provided inside the moulding for loop connections and the termination of cable screening. Provision is also made for the connection of a remote LED when required.

Standard Features

- Common to all ZP7 series detectors
- Automatic locking option
- Address identification label
- Ease of installation

Automatic locking option

In order to prevent unauthorised removal of a detector from its base, an automatic locking breakout is incorporated into all detector mouldings. If the breakout is removed, detectors can only be released from their bases by use of a special tool. The locking facility is an easily applied option often implemented on site at the system commissioning stage.

Matching spaces for address labels are provided on detector and base mouldings ensuring that when removed, they are replaced in the correct location. The address number facility also enables detectors to be easily identified when viewed from floor level.

ZITON Product Data Sheet

ZP720-3P

ZP7 Series Addressable Thermal Detector -
POLAR WHITE

General

The ZP720-3P addressable thermal detector is a POLAR WHITE, thermistor controlled device that responds to changes in its ambient temperature. The device provides a reliable response to fires in areas where environmental conditions may prohibit the use of smoke detectors.

The sensitivity of each detector is set by the ZP control panel and can be adjusted between four levels ranging between 58°C and 75°C - either manually or automatically on a timed basis. At sensitivity level two, the ZP720-3 fully meets the requirements of EN54 Pt 5 (grade 1) and is approved by several international approval bodies. Temperature levels are continuously sensed by the unit and transmitted via the ZP wiring loop as electronic signals, which are assessed and verified by the control panel prior to any alarm decision being taken.



Automatic self test

Detector sensitivity, calibration and self test are carried out automatically by the ZP system. Removal or replacement of an incorrect sensing device will be identified by the system and shown as a fault.

Up to 127 sensing devices may be connected to each of the control panel loops. All loop devices incorporate switch settings enabling them to be given a unique address, which is polled by the panel every two seconds.

Locking base option

The low profile moulding together with either surface or recessed bases makes the unit ideal for both commercial and industrial interiors. A red LED indicator situated on the sensor moulding, flashes to indicate when the unit is in alarm.

For ease of removal, detectors plug into a range of base units by a simple twist and lock action. A site selectable option is provided to lock the detector into its base. Once applied, the unit can only be removed by means of a special tool.

Space for address labels is provided on detector and base mouldings ensuring that units are replaced in their correct location and that address numbers can be identified from floor level.

Standard Features

- Analogue sensing - reduces false and unwanted alarms
- Addressable - system knows the status and location of every sensor
- Automatic self test
- EN54 Part 5 approved and CPD certified

ZITON Product Data Sheet

ZP730-2P

ZP7 Series Addressable Optical Smoke Detector
- POLAR WHITE

Reliable sensing for most fire alarm applications

Designed for early response to slow burning, smoldering fires, the ZP730-2P is a POLAR WHITE, addressable smoke detector developed to provide reliable sensing for most fire alarm applications. The detector's proven stability in air movement associated with air conditioning systems has made it a popular selection for modern building interiors.

Operating on light scatter principles, the ZP730-2 fully meets the sensitivity requirements of EN54 Pt 7 and is approved by several international approval bodies.

Automatic self test

False and unwanted alarms are virtually eliminated - smoke levels are continuously sensed by the unit and transmitted via the ZP wiring loop as electronic signals. These are assessed and verified by the control panel prior to any alarm decision being taken.

Installed as part of a ZP addressable system, up to 127 sensing devices may be connected to each of the control panel loops. All loop devices incorporate switch settings enabling them to be assigned a unique address that is polled by the panel every two seconds.

Sensor sensitivity, calibration and self-test are carried out automatically by the ZP system. Removal or replacement of an incorrect sensing device will be identified by the system and shown as a fault. Sophisticated auto contamination adjustment compensates for any drift in performance due to dirt in the sensing chamber.

Locking base option

For ease of removal sensors plug into a range of base units by a simple twist and lock action. A site selectable option is provided to lock the sensor into its base. Once applied the unit can only be removed by means of a special tool.

A red LED indicator situated on the sensor moulding flashes to indicate when the unit is in alarm. Space for address labels is provided on sensor and base mouldings, ensuring units are replaced in their correct location and address numbers can be identified from floor level.



Standard Features

- Responds to slow burning fires
- EN54 Pt7 and CPD certified
- Analogue sensing - reduces false and unwanted alarms
- Addressable - system knows the status and location of every sensor
- Alarm verification, self test, auto contamination adjustment

CEILING SPEAKER

EN-CM5T6

Certificate No.: 1438/CPD/XXXX

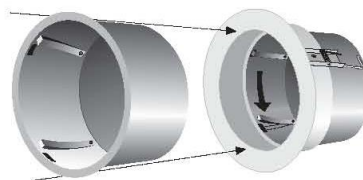


The Apart-Audio EN-CM5T6 is a built-in ceiling speaker made of powder coated steel (RAL 9010 equivalent), equipped with a high efficiency full range speaker and a multitap 100 volt transformer, all certified according EN 54-24. The unit is equipped with a ceramic speaker line connector block, thermal fuse and metal firedome. Installation is made easy thanks to the spring loaded clamps and the included PG16 cable gland. Popular applications: background music, microphone calls (paging) and evacuation systems.

The highlights are: steel frame and grille, ceramic connector block, thermal fuse.

Mounting instructions

1. Insert the outer frame (ring) into the ceiling and fix it with the spring clamps.
2. Slide the firedome into the frame:
Lift the three plate springs from the spring slots and turn them sideways.
Put the speaker cable through the cable gland. Position the dome under the notches and put it in line with the slots.
Turn the plate springs to original position, into the slots.
3. Connect the speaker cable to the ceramic connector block.
4. Mount the grille into the frame by turning it clockwise while gently pushing it up.



Safety precautions

- Keep this manual for future reference.
- When making the hole in your mounting panel to mount the Apart speaker, make sure there is sufficient clearance behind the panel (no obstructions like A/C channels, power lines etc, ...).
- Take care of your speaker wires, they should be free of damage. Damaged speaker wires may result in poor sound quality and can damage amplifiers.
- Only use accessories specified by the manufacturer.
- Make sure the mounting panel can support the speaker's weight.
- Use a sufficient amount of speakers to avoid dead spots.
- No main power shall be connected to the loudspeakers, doing so will damage the speaker.
- This apparatus should only be serviced by qualified personnel. If not serviced by qualified personnel, warranty may be void.
- Use cable of the right gauge, certainly for long runs.
- Use cables with clear color indication and maintain polarity throughout the whole system.
- Avoid loud feedback from microphones, this can damage your speaker.
- Please check the unit's condition after unpacking. If the outside of the carton box has been damaged, inform your shipper immediately.

Warranty info

Apart Audio warrants this product to be free of defects in material and workmanship for a period of one year for parts and for a period of one year for labor from the date of original end-user purchase. This warranty is valid only for the original end-user and cannot be transferred. During the warranty period Apart Audio or one of its authorized service partners shall either repair or replace any product, free of charge, that proves to be defective on inspection by Apart Audio or its authorized service representative. This warranty does not include, damages or product faults due to abuse, misuse or faulty installation.

Legal info

Audioprof nv
Industriepark Brechtsebaan 8 bus 1, 2900 Schoten - Belgium
Company names, product names and trademarks are property of their respective owners. Apart-Audio specifications are subject to change without notice.



Technical specifications

Speaker type	coated paper cone
Woofer size	5 inch
Diameter	180 mm
Cutout dimensions (Ø)	172 mm
Mounting depth	158 mm
Colour	RAL 9010
100 volt transformer power taps	6 / 3 / 1.5 watts
Frequency response (-10 dB, IEC268-5)	333 - 18900 Hz
Frequency range	320 - 19000 Hz
Dispersion angle -6 db, 500 Hz / 1 kHz / 2 kHz / 4 kHz	180° / 180° / 130° / 55°
SPL 1W / 1m (IEC268-5)	93.5 dB
SPL 1W / 4m (IEC268-5)	81.5 dB
SPL Pmax / 4m (IEC268-5)	89.3 dB
SPL Pmax / 1m (IEC268-5)	101.3 dB
Sensitivity EN54-24, 1W / 4m	77.0 dB
IP classification	50
Chassis & grille material	steel, powder coated

Cavi



UTC Fire & Security

A United Technologies Company

Cavo antincendio resistente alle fiamme sez. 2x1 mm², di tipo schermato, EN50200

WFA10210

Il WFA10210 è un cavo antincendio con guaina isolante in mescola speciale che garantisce una resistenza alle fiamme per almeno 30 minuti, con sezione 2x1mm² di tipo schermato, conforme alla nuova normativa EN50200 in vigore da gennaio 2010. Il cavo è fornito in matasse da 200 m e guaina di colore rosso.

Dati tecnici

Conduttore

Sezione	1 mm ²
Isolamento	mescola spec. Silicon Rubber
Resistenza	18.10 ohm/km +/- 5%
Diametro totale	7.1 +/- 0.3 mm
Temperatura di lavoro	-15 °C a +90 °C
Tensione di Test	5000 V
Capacità	< 250 pF/m
Tensione nominale	600 / 1000 V

Come ordinare

WFA10210 Cavo antincendio resistente alle fiamme sez. 2x1 mm², di tipo schermato, EN50200



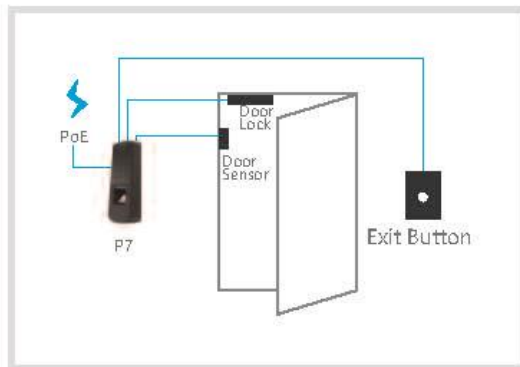
- Colore conduttori: marrone-blu
- Nastro di copertura conduttori in alluminio, schermatura di drenaggio in rame
- Guaina isolante in mescola speciale di colore rosso
- Conforme alla norma EN 50200
- Bassa emissione di fumo e zero alogeni
- Matassa da 200 metri

Application

Flexible applications such as standalone, secure and network system for different industries.

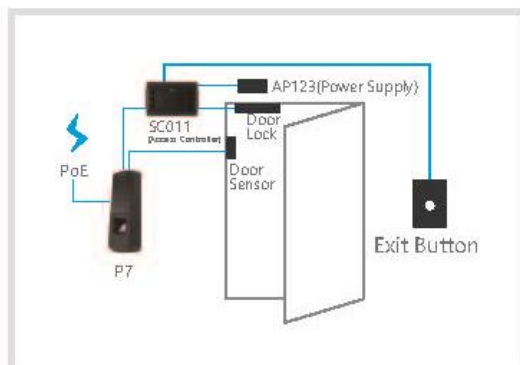


Network Topology Illustration



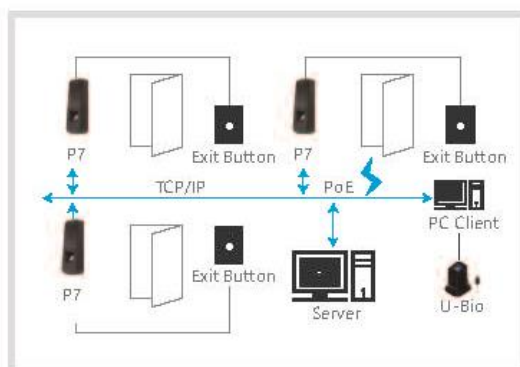
Standalone Access Control System

The core part of this system is stand alone access control. With the lock directly controlled by the standalone access control, this system is able to supply easy and safe solution.



Secure Access Control System

The secure system consists of an access controller and reader. Because the lock is controlled by the access controller, this system is more secure and suitable for a single door having higher safety requirement.



Network Access Control System

The network access control system consists of different access control systems such as stand-alone system, secure system and distributed system. This system is the most professional solution, which best fits projects with multiple requirements.

P7 is a new generation access control device of Anviz. The P7 adopts touch activation technologies in fingerprint sensor and keypad easy for user operation. As an access control, which are designed with PoE communication and access interface separation, make the P7 easy for Installation and cost down the labor. The powerful access control function is indispensable for P7. Relay output for door control, Wiegand output and group, time zones. Multi communications with TCP/IP, RS485 and Mini USB port. The Alarm push function will protect access control safe.



High Precision OLED Display



Touch Keypad&Sensor



PoE



Access Control Equipment



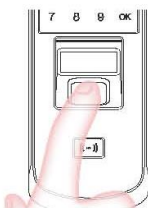
CrossChex



Event Push

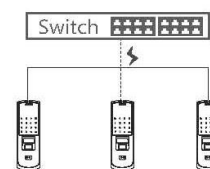
Touch-On

When you place your finger on fingerprint sensor, sensor will be activated automatically and no need to press any key to awake the device from sleeping.

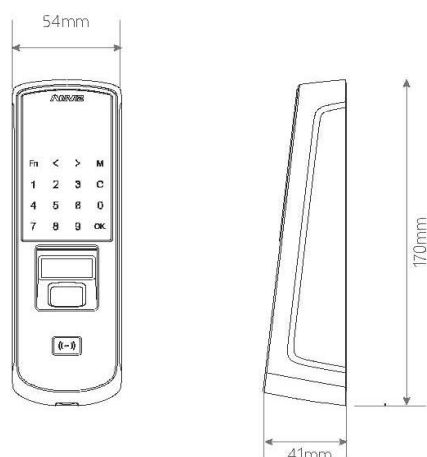


PoE

Power Over Ethernet provide device network communication and the power is enough for both device and lock working.

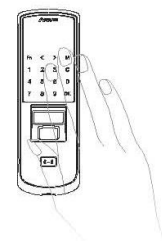


Outline Drawing



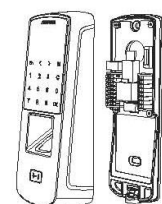
Sense-On

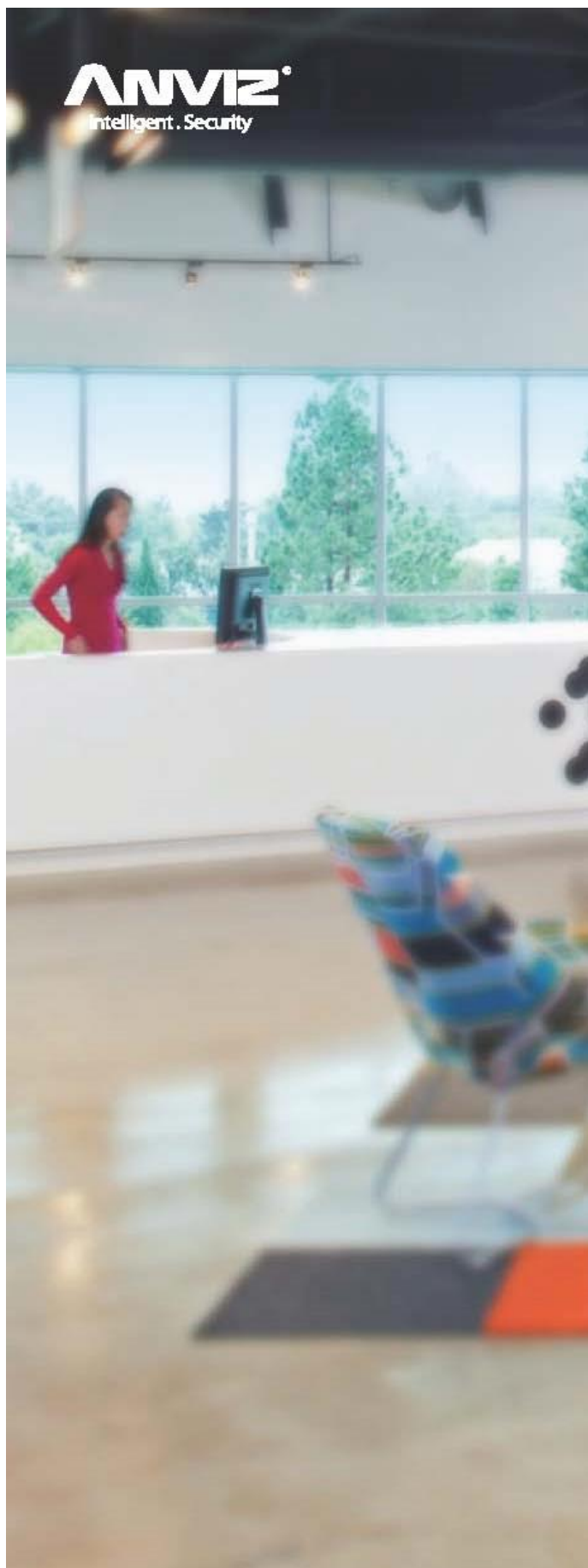
When you reach out your hand to touch the keypad, P7 will be activated automatically and ready for your entering.



Easy Installation

The access interface adopts quick Install connector, without any tools to finish the wiring of the access control. The P7 with front and rear separation design will further simplifies installation operation for installer.





P7

PoE-Touch Fingerprint and
RFID Access Control



VAN-MLSH01-0 SERIES

Electro-Magnetic Locks

SPECIFICATIONS:

- Dimensions:
 - Magnet - 250L x 42H x 28D (mm)
 - Armature Plate - 180L x 36W x 11T (mm)
- Surface Mount
- Current Draw: 500mA / 12V, 250mA / 24V
- Dual Voltage: 12V / 24V
- Holding Force: About 800 lbs
- Built-in Voltage Spike Suppressor
- CE Approved
- UL Listed

ORDERING:

VAN-MLSH01-0	Vanguard Mag Lock, 800lbs, Basic Lock
VAN-MLSH01	Vanguard Mag Lock, 800lbs, Lock + Sensor
VAN-MLSH02	Vanguard Double Mag Lock, 800lbs, Lock + Sensor
VAN-B0011	Armature Housing for VAN-MLSH01-0 & VAN-MLSH01
VAN-B1011	Adjustable Bracket for VAN-MLSH01-0 & VAN-MLSH01
VAN-B1012	L&Z Bracket for VAN-MLSH01-0 & VAN-MLSH01
VAN-B1003	Angle Bracket for VAN-ML01, VAN-ML01H, VAN-MLSH01-0 & VAN-MLSH01
VAN-B1004	Filler Plate 5/8"
VAN-U185	U-Bracket on Glass Door for VAN-MLSH01-0, VAN-MLSH01, VAN-ML01, VAN-ML01H



VAN-ML200 SERIES

Electric Bolts

SPECIFICATIONS:

- Dimensions:
 - Body: 200L x 34W x 42D (mm)
 - Cover Plate: 210L x 42W x 0.8D (mm)
 - Face Plate: 200L x 34W x 3D (mm)
 - Strike Plate: 90L x 24W x 27D (mm)
- Current Draw: 12V/0.9A (Pull-In Current)
- Holding Current: 12V/0.3A
- Fail-Safe: Locked when Energized
- Voltage: 12V/24V
- Bolt: S/S 15.5 dia. with 16mm Throw
- Auto-relock Jumper
- Weight: 0.9 Kgs
- CE Approved

ORDERING:

VAN-ML200SLD	Vanguard Drop Bolt, Lock + Sensor, 12VDC
VAN-ML200SLD-24	Vanguard Drop Bolt, Lock + Sensor, 24VDC
VAN-UG200	S/S Bracket for Elec Bolt on Full Glass Door
VAN-UG201	S/S Bracket for Elec Bolt on Glass Door



VAN-ST125 SERIES

Electric Strikes

SPECIFICATIONS:

- Dimensions: 125L x 44W x 38D (mm)
- Voltage: 12V / 24V
- Modes: Fail Secure or Fail-Safe
- Current Draw: 400mA / 12VDC, 200mA / 24VDC
- Face Plates:
 - ST125: Stainless Steel (185L)
 - ST125F: Aluminum
- CE Approved

ORDERING:

VAN-ST125	Vanguard Door Strike, Fail Secure, 12VDC
VAN-ST125F	Vanguard Door Strike, Fail Safe, 12VDC
VAN-ST125-24	Vanguard Door Strike, Fail Secure, 24VDC
VAN-ST125F-24	Vanguard Door Strike, Fail Secure, 24VDC



Card Printers

Professional ID Card Printers



Rio™ Card Printer (PBVP35)

Built tough to withstand the hard work of high throughput jobs, but also ideal for low duty-cycle applications. Downloads and prints a single-sided full color card image (YMCKO) in less than 20 seconds using advanced bidirectional USB or parallel port.

Tango™ Double-Sided Card Printer (PBVP35DO)

The leading printer for high volume printing applications. The Tango™ downloads and prints a double-sided, full color image in 40 seconds using advanced bi-directional USB or parallel port. Prints double-sided YMCKOK in around 30 seconds.

Alto™ Card Printer (PBVP43)

The smallest and lightest in its class. This secure, entry-level, hand-fed printer downloads and prints a full color, edge-to-edge image in 30 seconds and features a HoloKote® RFID Custom Key™ facility.

Sicura™ Laminator (PBVP35LAM)

Applies a tough, polyester overlaminate onto pre-printed cards to protect against physical damage and tampering. Overlaminates can feature a custom hologram logo. The Magcard™ Sicura™ can be used in tandem with Rio™ and Tango™ printers or as a stand-alone laminator with the Alto™.

Applications

Access Control	Membership Cards
Barcoded Cards	Official Passes
Business Cards	Photo ID Cards
Loyalty Cards	Visitor IDs
Magstripe Cards	

FEATURES

HoloKote™

Built-in security watermark comes free with every Rio™, Tango™ and Alto™ printer. For highest security and card forgery protection, custom logos can be programmed on a unique Custom Key (limited to custom text only on the Alto™).

HoloPatch™

HoloPatch™ cards have a highly reflective gold "super diffuser" patch which is used in conjunction with the HoloKote™ anticounterfeiting feature to highlight a selected logo for distance visibility. The HoloPatch™ feature can also be applied to customer supplied prox cards if required.

UltraCoverplus®

A free two-year warranty with no-quibble printhead and loaner coverage (standard in US and EU).

Full Bleed

Edge to edge, high-quality 300 dpi images. Supported by Rio™, Tango™ and Alto™

Duplex Printing

Double-sided printing is supported by the Tango™ only.

Mag Stripe

A dual coercivity HiCo/LoCo magstripe encoder option which offers encoding of all three tracks with complete user format flexibility (Alto™ is limited to HiCo and tracks 1 & 2).

Chip Encoding

Optional ISO 7816 internal smart card chip encoding contact station with direct connection to a DB9 connector on the rear of the printer. Can be combined with the Magstripe Encoder option for Rio™ and Tango™ only.

Biometric Encoding

Optional ISO 14443A or B contactless smart card encoder with variants for OmniSmart, I-Class, MIFARE and others. Ideal for biometrics, fares, vending and access control. Rio™ and Tango™ only.