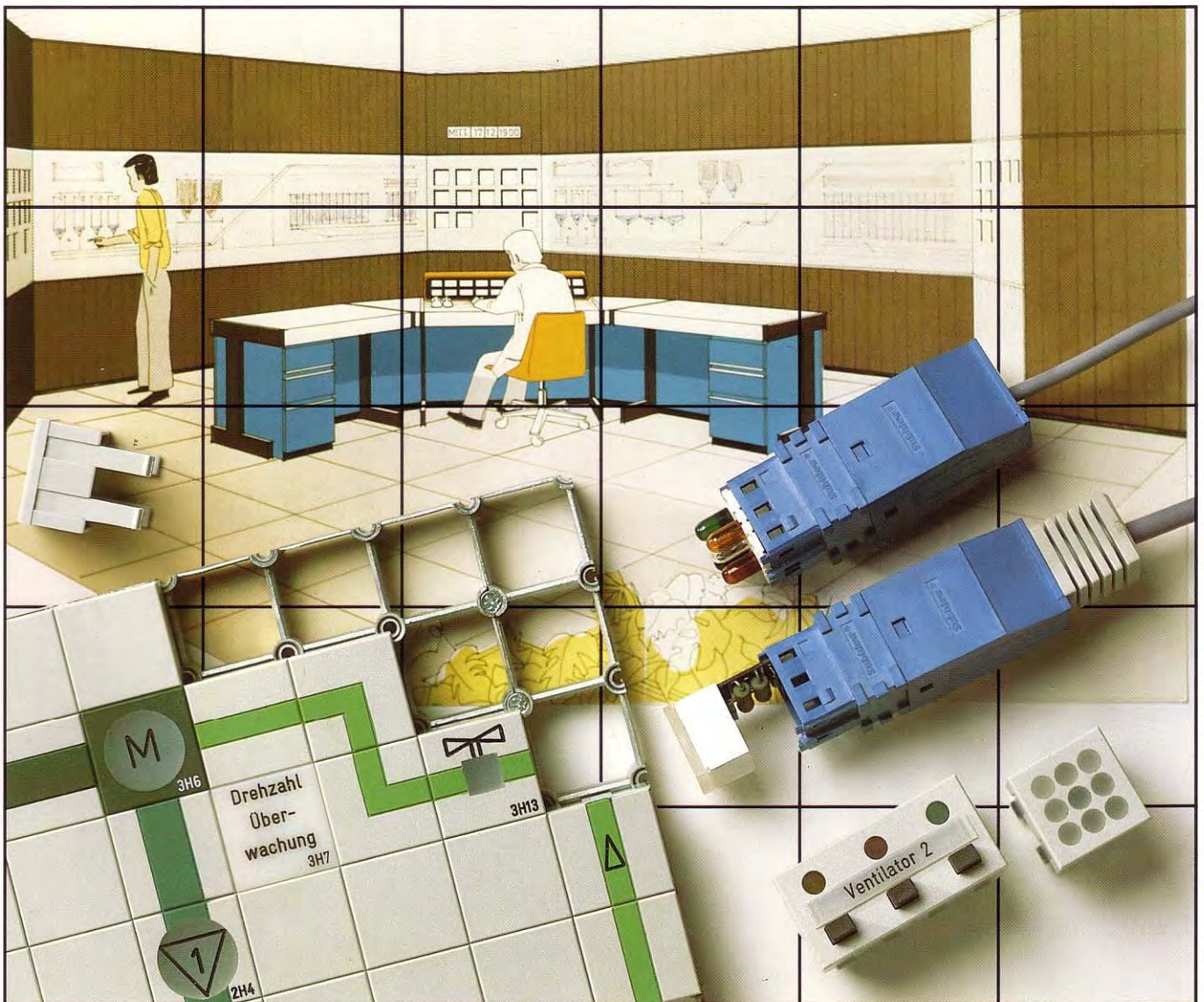




Mosaic Tile System & Control Room Equipment

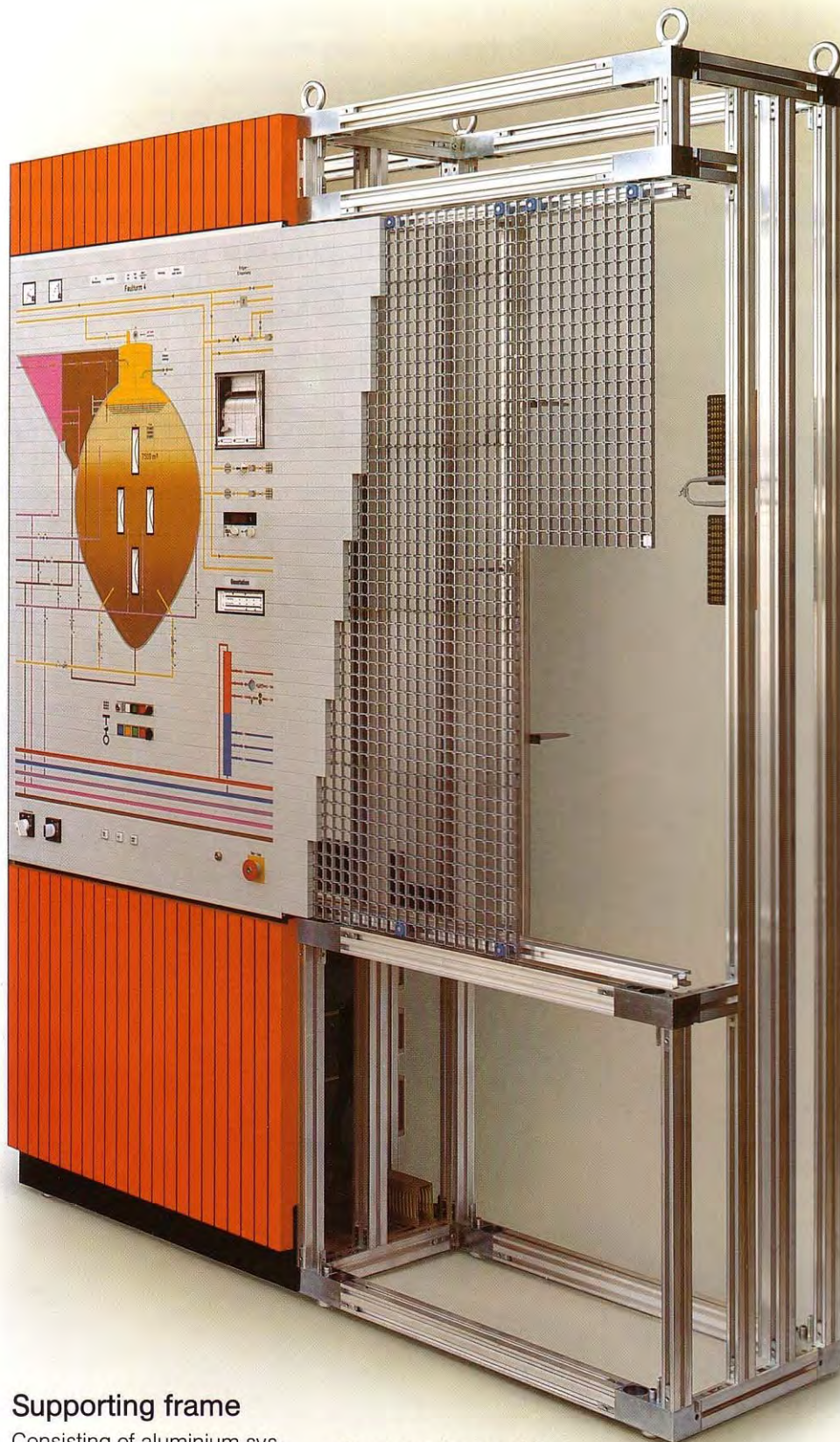
Planning and construction using mosaic tile technology System SM 24 and SMF 48x24



A mosaic tile system with method to it

Mosaic tile systems are still the most planner-friendly, reliable and economical approach to process visualization. These

are merits we intend to go on providing in our mosaic tile system. The SM 24/48 mosaic tile equipment has been used worldwide since 1968 and now has the versatility that planners and users need for their project planning and implementation.



Supporting frame

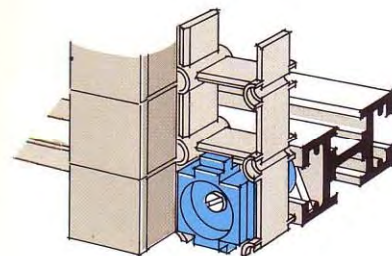
Consisting of aluminium system profiles screwed together with corner and T-connectors. Offers maximum flexibility for ease of modification. No welding and drilling required. Wooden, plastic, aluminium or sheet metal panelling. Easy and weldless extension possible.

Supporting grid

Robust supporting die-casting zinc alloy "Zamak". Basic grid element for 12 x 24 tiles, suitable for arranging and extending to any desired size, 24 or 48 mm module. Straight or curved. Easy closing of cutouts.

Mosaic Tiles

Hollow Macrolon® (polycarbonate) tiles, flame-retarding (VO), anti-static, light-resisting and non-reflecting. Slightly



chamfered tile edges ensure a smooth surface even after long periods of time.

Standard colours: light grey, beige, anthracite, light green. Tile sizes: 24 x 24, 24 x 48, 48 x 48 mm, may be combined with each other. Panel flush mounting of measuring instruments. Tile cassettes for mounting devices of any size.

Aluminium constructional system

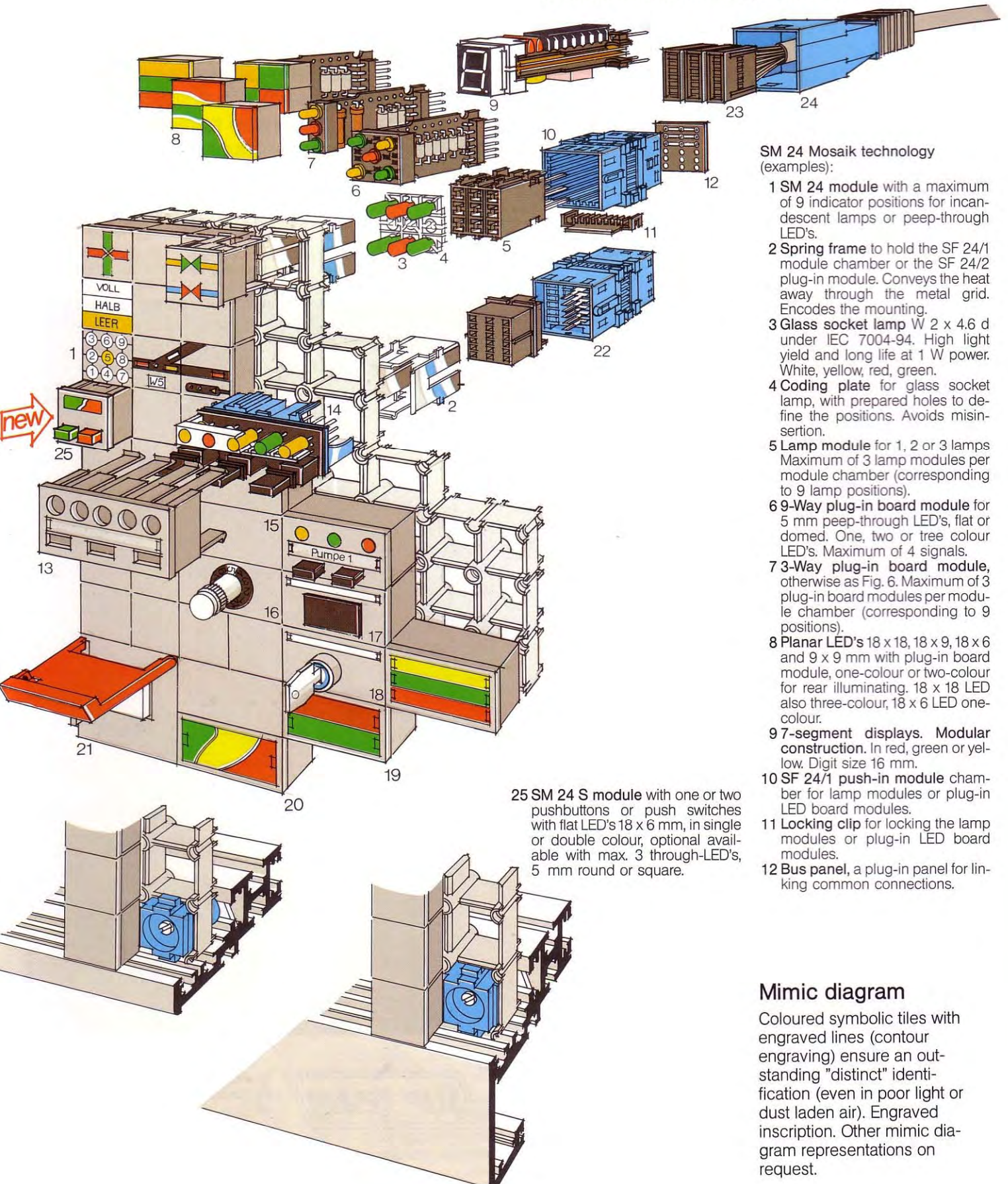
A newly developed aluminium constructional system can be used for a modular electrical and mechanical setup.

This gives the Subklew mosaic tile system just the flexibility you need from the initial planning to final production.

Plug-in Modules SF 24/1

Main feature of the extended mosaic tile system is the large number of carefully matched elements and the high information density afforded by a 24 plug-in module with a 9-way indicator unit for lamps, or peep through LED's, LED large-area illumination, LCD technology or plug-in modules with memory function.

Mosaic tile technology with a future.



SM 24 Mosaik technology (examples):

- 1 SM 24 module with a maximum of 9 indicator positions for incandescent lamps or peep-through LED's.
- 2 Spring frame to hold the SF 24/1 module chamber or the SF 24/2 plug-in module. Conveys the heat away through the metal grid. Encodes the mounting.
- 3 Glass socket lamp W 2 x 4.6 d under IEC 7004-94. High light yield and long life at 1 W power. White, yellow, red, green.
- 4 Coding plate for glass socket lamp, with prepared holes to define the positions. Avoids misinsertion.
- 5 Lamp module for 1, 2 or 3 lamps. Maximum of 3 lamp modules per module chamber (corresponding to 9 lamp positions).
- 6 9-Way plug-in board module for 5 mm peep-through LED's, flat or domed. One, two or three colour LED's. Maximum of 4 signals.
- 7 3-Way plug-in board module, otherwise as Fig. 6. Maximum of 3 plug-in board modules per module chamber (corresponding to 9 positions).
- 8 Planar LED's 18 x 18, 18 x 9, 18 x 6 and 9 x 9 mm with plug-in board module, one-colour or two-colour for rear illuminating. 18 x 18 LED also three-colour, 18 x 6 LED one-colour.
- 9 7-segment displays. Modular construction. In red, green or yellow. Digit size 16 mm.
- 10 SF 24/1 push-in module chamber for lamp modules or plug-in LED board modules.
- 11 Locking clip for locking the lamp modules or plug-in LED board modules.
- 12 Bus panel, a plug-in panel for linking common connections.

25 SM 24 S module with one or two pushbuttons or push switches with flat LED's 18 x 6 mm, in single or double colour, optional available with max. 3 through-LED's, 5 mm round or square.

Mimic diagram

Coloured symbolic tiles with engraved lines (contour engraving) ensure an outstanding "distinct" identification (even in poor light or dust laden air). Engraved inscription. Other mimic diagram representations on request.

Function Module

SMF 48 x 24

The advantage of our hollow mosaic modules has been logically used and redeveloped into function modules. With the greatest variety of functions within the modules and with the SF 24 plug sockets behind the grid, the greatest amount of scope is given to the planner or user.

Without committing himself at an early stage, with mosaic for small and compact control

technology he can plan up to the construction phase before deciding and designing his mosaic within the 24 size supporting grid, economically and specific to the application.

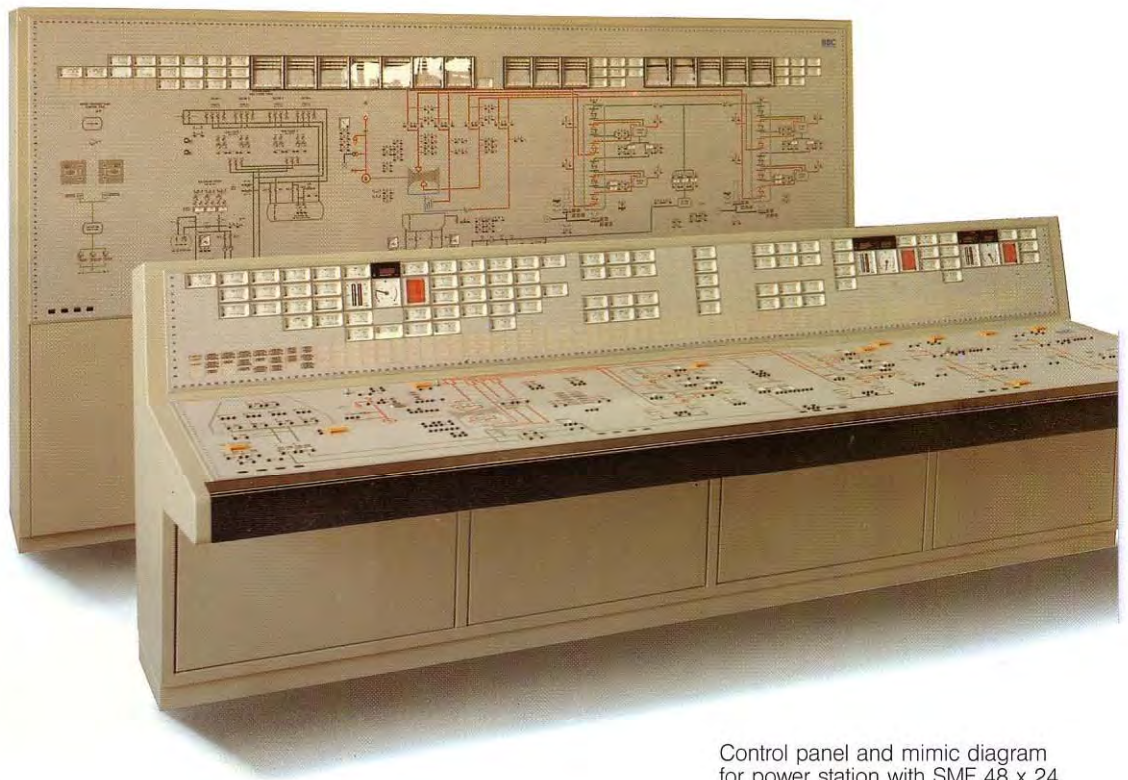
A wide range of function modules are available to meet any customer requirements, and with the practical technology all users problems can be reliably solved.

As for example with our latest development: large title boxes, which can be illuminated in more than one colour with planar LED technology.

SMF 24 Function Modules (examples):

- 13 SMF 48 x 24 module with a maximum of 5 LEDs title box 42 x 6 mm and a maximum of 3 push-buttons or push switches.
- 14 PCB panel for Fig. 13 with LEDs, push-buttons, push rods, hybrid circuit, contact pins and insulating cap.
- 15 SMF 48 x 24 module with 3 LEDs, title box and 2 push-buttons.
- 16 SMF 48 x 24 module with selector switch, changeover switch or multiple-contact switch.
- 17 SMF 48 x 24 module with larger pushbutton, flat or raised (3 mm) with title box 42 x 3 mm.
- 18 SMF 48 x 24 module with key switch and coloured identification ring. Title box 42 x 3 mm. Lock cylinder made by Kaba®.
- 19 SMF 48 x 24 module with 2 title boxes 42 x 9 mm, also can be illuminated with 36 x 9 mm planar LEDs, in one or two colours.
- 20 SMF 48 x 24 module with one title box 42 x 18 mm, also can be illuminated with 36 x 18 mm planar LED's, in one, two or three colours.
- 21 SMF 48 x 48 module with emergency stop switch and red covering cap, and 42 x 3 mm title box, which can be illuminated with 36 x 9 mm surface LED, in one or two colours.
- 22 SF 24/2 connector module for function modules, 1-18 contact positions.
- 23 Connector housing, 6-way or 18-way, for spring contacts with crimp connections. Suitable for cable sizes 0.1 to 0.35 mm or 0.3 to 0.75 mm.
- 24 Connection cap with strain relief.

All connection contacts have 0.635 mm crimped-type push-on connectors. Tinned or optionally gold-plated.



Control panel and mimic diagram for power station with SMF 48 x 24 function modules in mixed construction mode with SM 24 mosaic.

Illuminated Symbols

Flush-mounted acrylic symbols (Perspex®) Opal or coloured tiles.

Lighting Symbols

Standard illumination with incandescent lamps or peep-through LED's (flat or domed). LED's developed by us in hybrid technology (for rear illu-

minating 9 x 9 to 18 x 18 mm or 6 x 36 to 18 x 36 mm) provide high-grade illumination. All LED's are pluggable. It is possible subsequently to change from incandescent lamps to planar LED's without modifying the illuminated symbols or re-wiring.

The plug-in modules are simply exchanged.

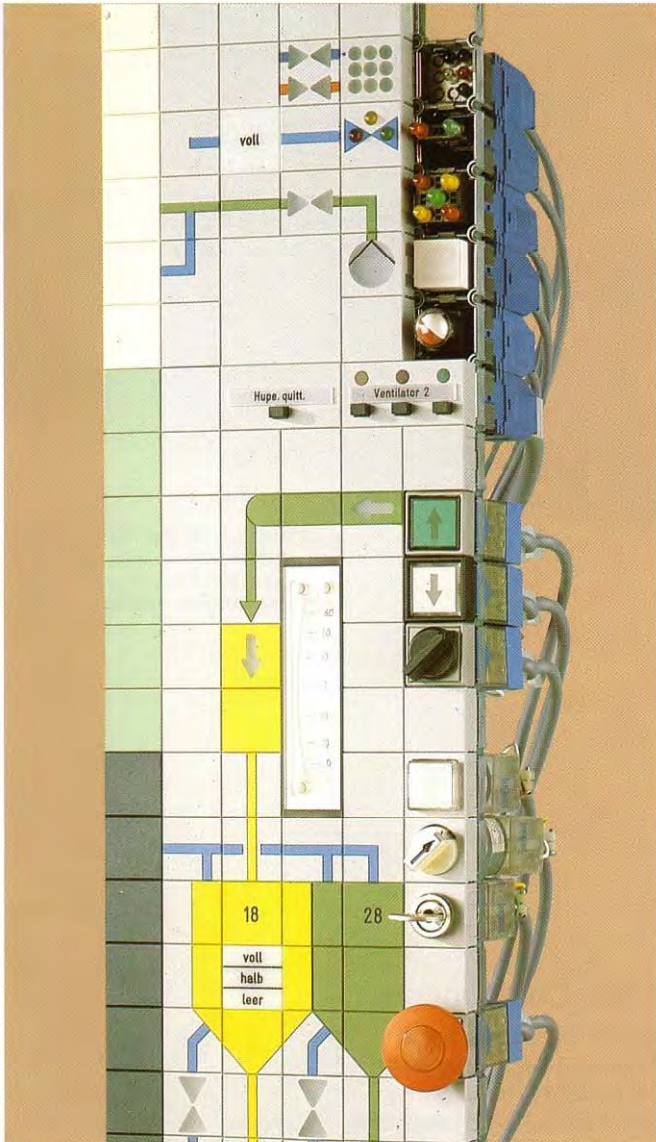
Active Components

Dismantling and conversion of illuminated pushbuttons and switches, "Emergency Stop" pushbuttons, rotary and key-operated switches as well as semaphore indicators from SB 24 range by simple removal from the plug base without change of wiring. Complete range of illuminated universal rotary switches available.

Our modular 7-segment display with 16 mm digit height is designed so as to be particularly unsusceptible to interference, and tolerates errors of 20 %.

Illuminated Mosaic Diagrams

These are supplied by our partners both large and small either completely installed in control desks, switchboards and panels or for installation by the customer. Suitable for all kinds of control and monitoring indicator boards, e.g. for process control, power networks, security . . . Mosaic technology is above all an ideal support system for incorporating and displaying information, texts and drawings. Mosaic modules allow for every kind of variation, can be changed as often as required, and can also be added to or converted at a later stage. Even if a last minute planning alteration or wrong designations and texts emerge, our mosaic system makes all the corrections possible.



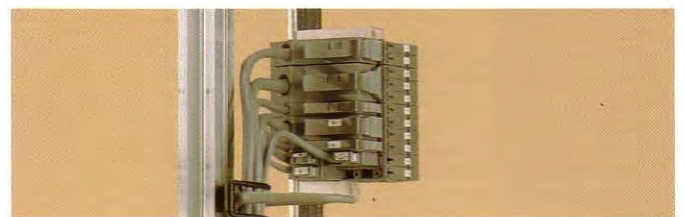
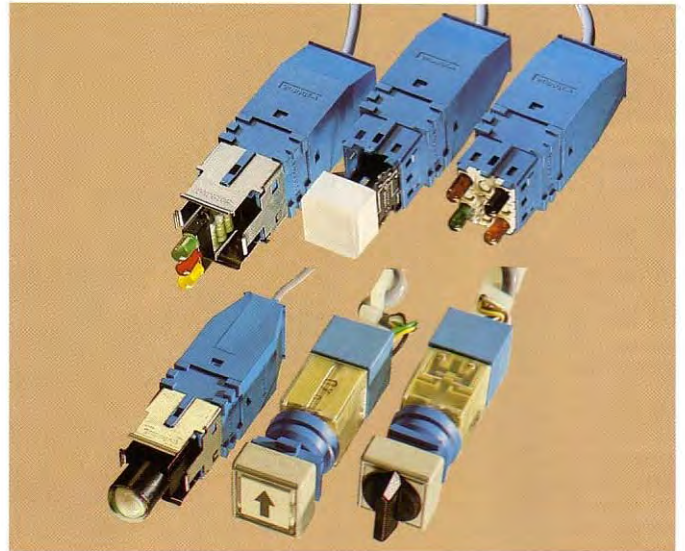
Wiring

Standard wiring with 2.5 m cable and plug on plug terminal. Plugs in 2-, 4-, 6-, 8- and 12-pole version. Plug terminals for low

voltage: with 12 x 12 contact points for 6.3 x 0.8 mm solder flat socket connection and/or 2 x 2.8 x 0.8 mm wire wrap or termi-point con-

Control Desks

In cooperation with our partners we offer you nearly every typ of control desk solution. Producing a control desk requires a lot of prior thought. About meaningful operational functions, about ergonomic requirements, about a pleasing appearance and how to achieve maximum quality coupled with optional cost-effectiveness.



nection. The plugs are non-reversible and lockable. Plug terminals for control voltages 220-380 V: with a 4-pole terminal block to be placed

side by side as desired, screw-connected (max. 2.5 mm² flexible) or plug-connected 6.3 x 0.8 and/or 2 x 2.8 x 0.8 mm.

Planning and design

Planning and execution of control rooms and control desks should not be the result of mere chance or taste.

Just because man is the centre and at the same time, the weakest link in the process, control room planning and design are factors of special significance.

The experts of our planning and design partners know all the specific design criteria.

From workplace ergonomics, through lighting, air conditioning, acoustics, colour schemes and safety aspects, all the way to architectural measures.

Problems and their individual solutions.

There are simply no display problems that cannot be solved using the 15, 24, 24 x 48 or 48 mm system.

For many years we now have been concentrating our efforts on mosaic tile and control-room technology, with licensees worldwide and with a service to match.

Your plant diagrams are always the centre of attention, and that's where quality is not just a matter of opinion.

One reason more for calling our local partner for the implementation stage, but also in the initial planning phase of the project.

So talk it over with us if you want to get into mosaic tile systems.

Control room of a city's public transport system, with panoramic panels for route and traffic flow monitoring using the SM 24 mosaic tile system.



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